

P A R I S I A N

2230

# CHIRURGICAL JOURNAL,

By *MONSIEUR DESAULT*,

PRINCIPAL SURGEON TO THE HOTEL DIEU:

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TRANSLATED INTO ENGLISH

By *ROBERT GOSLING*, SURGEON, LONDON.

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IN TWO VOLUMES.

VOL. II.

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2230

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P A R I S I A N  
CHIRURGICAL JOURNAL.

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*Case of Retention of Urine occasioned by a Contusion of  
the Perinæum.*

[By Mr. MAUNOIR, of Geneva.]

MR. Maunoir observes, that the case mentioned in vol. I. page 362, of the Chirurgical Journal, calls to his recollection one inserted in the London Medical Journal, (vol. XII. part ii. page 109.) In this last case, the perinæum was contused by the edge of a chair, in the same manner as Mr. Cagnion's patient by the axle-tree. The symptoms were nearly the same, but the variation in subsequent events may be attributed to the different modes of cure adopted in England and France.



Mr. Maunoir continues to observe, that the means to derive advantages, by appreciating the different curative modes adopted in different countries, and often in the same city, is by comparing the result of cases of a similar description. This species of comparison would necessarily tend to the improvement of the art.

Mr. Maunoir then proceeds to draw what he conceives an interesting parallel, from the respective events, and modes of treatment, adopted in these two cases. After giving a precise history of every essential circumstance in the English case, he proceeds, with some remarks on the two cases in question, to prove the direct and evident influence of surgery, in disorders submitted to its action.

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*Extract of the Case from the London Medical Journal.*

A soldier, 30 years of age, in attempting to leap over two chairs, placed back to back, fell with his thighs separated on the cross-bars, and contused the perinæum with such violence, that he instantly fainted, and remained for some time perfectly senseless. Some hours afterwards, having regained his strength, he went to the parade; but, when in the ranks, he was attacked with a copious hemorrhage from the  
penis,



penis, accompanied with violent pain in the contused part. Twenty-four hours afterwards, he had a complete retention of urine.

Messrs. Walker and Billam could not succeed in the introduction either of a bougie or catheter, but they were consoled by seeing the symptoms rapidly yield to the observance of an antiphlogistic regimen, and by the patient's apparent recovery, which took place in about 4 days.

On the 28th of May, 1775, 10 days after the accident, the swelling of the perinæum and abdomen re-appeared,\* and the urine came away involuntarily. At present, the means, that had been in the first instance employed, were not attended with the same success. It may not be useless to remark, that the relator of the case attributes the relapse, not to the disease itself, (which was only palliated,) but to the intemperance of the patient.

When he was received into the General Infirmary of Leeds, on the 1st of June, he had a painful abscess in the perinæum, accompanied with a circumscribed tumefaction that extended as high as the umbilicus. The tongue was white, the belly bound, and the urine totally suppressed. To these symptoms were united an habitual difficulty of respiration, frequent hiccups, and extreme weakness. The patient also complained of a troublesome itching in the skin, and of intole-

\* Though this symptom is not mentioned in the relation of the Case, the expression *re-appeared* proves that it had existed in the first period of the complaint.



rable pain in the course of the urethra. To remedy  
 such a number of evils, several surgeons were consult-  
 ed, who agreed to place the patient in the same situa-  
 tion as in the operation for the stone. Mr. Lucas,  
 one of the surgeons of the Infirmary, opened the  
 abscess in perinæo, which discharged a considerable  
 quantity of pus. A small catheter was ineffectually  
 attempted to be passed, by the wound, into the  
 urethra: another attempt, equally unsuccessful, was  
 made, to pass both a bougie and catheter into the  
 natural passage; though, to facilitate this measure, the  
 patient was put in the warm bath. Laxative and  
 opiate clysters, cathartics, mercurials, anodynes, &c.  
 were administered without advantage. The urine not  
 being discharged, the surgeons agreed to puncture the  
 bladder above the pubis. The patient, whose suffer-  
 ings were extreme, objected, for 48 hours, to the  
 operation being performed.

From time to time a very small quantity of urine  
 was discharged, but not sufficient sensibly to mitigate  
 the pain, or obviously to diminish the tumour of the  
 abdomen, which now extended as high as the scrobi-  
 culus cordis.

On the 3d of June, the patient continuing in ex-  
 treme agony, signified a desire for the operation,  
 which was instantly performed. The surgeon thrust  
 his trocar in the middle of the hypogastric region, two  
 inches above the symphysis pubis, and penetrated  
 the bladder. Six pints of urine were drawn off, the  
 canula was left in the bladder, and the orifice closed  
 with a cork; the parts surrounding the canula were  
 guarded



guarded with sponge, to absorb the urine that might happen to escape. These were retained in their situation by a T-bandage, supported by a scapulary.

In the evening, when the cork was withdrawn, four pints of urine were discharged. On the 6th, the canula having slipped out of the bladder, could not be re-introduced; but, however, they succeeded in the introduction of a female catheter, which was judged proper to be left in the same situation. On the 7th, there was a painful tenesmus, with a tendency to expel the urine by the urethra, which induced the surgeon to renew his endeavours for the introduction of a catheter, or a probe, into the canal of the urethra, either by the wound in perinæo, or by the meatus urinarius; but, from the pain produced by these attempts, he was obliged to desist.

On the 20th, the urine escaped guttatim across the wound of the perinæum, which was at this time so contracted, that it scarcely admitted the end of a small probe. On the 26th, a very small bougie was passed by the meatus urinarius into the bladder, and a plentiful flow of urine procured. It was the intention of the surgeon to leave this bougie in the bladder; but, from the considerable pain subsequent to its introduction, he was obliged to withdraw it. It was then resolved to let the urine accumulate in the bladder, and to solicit its evacuation by the natural passage, or by the wound in perinæo. By way of precaution, the catheter was left in the bladder. On the 20th, it was withdrawn, as the bladder had completely regained the power of voiding its contents, which

it



it effected partly by the fistulous orifice, and partly by the meatus urinarius; but principally by the last. The patient gradually recovered his strength, and was discharged the infirmary, perfectly cured, on the 18th of August.

A year afterwards, he was admitted again, for a fistula in perinæo. A proper plan of treatment, adapted to his case, was adopted; but, during the process of his cure, he delivered himself up to those intemperate excesses which had produced a return of the fistula, for which he was expelled the hospital.

#### REFLECTIONS.

The two patients, whose cases are about to be compared, were both young and vigorous. Mr. Cagnion's patient had a violent and extensive contusion, with a crevice in the canal of the urethra. A considerable effusion of blood supervened, combined with infiltration and retention of urine; and the scrotum was threatened with gangrene twelve hours after the accident.

The English foldier felt a very acute pain at the time the accident happened, which soon subsided, as he went to the parade a few hours after the accident. At this time there was a hemorrhage from the penis, but without any effusion or infiltration in the perinæum. The retention of urine and other symptoms

symptoms soon disappeared, though no other plan but that of regimen was observed. The contusion terminated by suppuration, and the symptoms, which came on on the 10th day, appeared to have been caused by the abscess more than by intemperance.

The opening of the abscess gave issue to a considerable quantity of pus; but no notice is taken of any effusion or infiltration of urine; which proves that the canal was not open. When these circumstances are considered, it is not astonishing that a small catheter could not be introduced into the bladder. But the most difficult circumstance to believe, is the pretended impossibility of passing the catheter through the natural opening of the penis, especially after the indurations were resolved and the abscess opened, which ought to have rendered the canal in some degree more free. Nor can we conceive the motive for prescribing warm baths, purgative clysters, and medicines of every species; &c. The bladder, however, was enormously distended, and the life of the patient in imminent danger, which, without doubt, would have been lost if the urine had not been evacuated.

The French carter did not experience any similar symptoms. At the instant of his admission into the Hôtel Dieu the bladder was emptied by means of a catheter, which was easily passed; for, at this early period of the accident, the swelling of the parts did not oppose a powerful resistance. The incision afterwards made in the perinæum and scrotum facilitated



tated the passage of the urine from the crevice in the canal; the symptoms also subsided a few days after the treatment. A month afterwards, when the canal was contracted in consequence of cicatrization, a catheter was passed in the urethra, and the wound healed over it.

It is but just to acknowledge, that the English patient was saved by the puncture. But this operation only averted the imminent danger, and did not re-establish the natural course of the urine. It was from this circumstance Mr. Lucas was induced to attempt the introduction of a catheter, a bougie, and even a probe, into the bladder, by the wound in the perinæum, as well as by the natural opening of the urethra.

The crevice that was formed in the canal, and which admitted of the escape of the urine drop by drop by the wound, was probably occasioned by these attempts, unless it was produced by the inconsiderable quantity of urine collected in the bladder, or rather by the erosion of the canal, near which, from the smallness of the external opening, pus might be deposited. They were at length enabled to pass a small bougie into the bladder; which circumstance proves, that a small catheter might have been introduced, with equal, and perhaps more, ease, and the patient, at the same time, not inconvenienced by its presence.

Mr. Maunoir observes, that he shall make no comment on the idea of the English surgeons, who wished to solicit the contraction of the bladder, by  
retaining

retaining the urine in its cavity. This method would have produced an effect precisely contrary to the one they were led to suppose, if the catheter that was in the wound made by the puncture, and the crevice in the canal, had not admitted of the constant escape of the urine.

The patient was discharged the hospital at the end of three months, and, doubtless, with a considerable contraction of the canal, though this circumstance is not mentioned; and what seems to confirm the truth of this remark, is the subsequent attack of an urinary fistula in perinæo; for the cure of which he was admitted into the hospital the following year.

Mr. Maunoir expresses his astonishment, that, in the year 1775, a treatment so extremely defective should be employed in England. In fact, this kind of treatment was generally followed. The catheters of the elastic gum were not used at that period; besides, the majority of practitioners did not comprehend the advantages that might be derived from these catheters in particular, or even from *catheterism* in general. Nor did they properly understand the effects of compression by means of the catheters on the urethra itself.

There is one obvious reflection, which must suggest itself to all readers, which is, that the art of surgery, in the state of its fullest perfection, fifteen years since, after three months treatment, left this case to terminate in an urinary fistula; and that the same art, employed for the cure of a similar case fifteen years later, prevented the fistula, and restored



to society a healthy individual, in the full and perfect possession of all his functions.

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*Case of a Wound of the Head.*

[By Mr. JULIAN, Surgeon to the Hôtel Dieu.]

FRANCIS Mion, a soldier, 30 years of age, and of a strong constitution, received, on the 14th of December, 1790, two cuts with a sabre. One slightly wounded the masseter muscle and the parotid gland, on the left side: the other wound was received on the middle and superior part of the os frontis, and divided the external table for the extent of two inches.

As he experienced no pain, he at first paid no attention to his wounds, and he suffered eight days to elapse before he applied to the Hôtel Dieu. The wounds at this time were dried up, and their edges swelled, red, and painful. They were dressed with pledgets dipt in the linimentum arcæi, and covered with an emollient cataplasm.

On

On the 3d day, suppuration was well established, the wounds red, and without pain: but, on the 5th night, he had a considerable access of fever, in consequence of drinking too much wine. The tongue and skin became dry, the wound pale, and the discharge sanious. A diluting regimen and a strict diet were directed. Two days afterwards the wounds had a more healthy appearance; but without any mitigation of the other symptoms.

On the 8th, there was a bilious vomiting, which appeared to afford some relief. On the 10th, the tongue was dry and yellow. To check this disposition ʒi. of cream of tartar was ordered in each pint of drink, which produced no effect whatever. On the 11th, the fever increased, and its force was not the least mitigated by the evacuation of bleeding. The wound in the cheek was nearly cicatrized; but that of the os frontis was extremely unhealthy in its appearance.

Towards the evening the suppuration was suppressed and his recollection lost. A blister was applied over the scalp, without the symptoms being diminished. The pulse became small and concentrated, he was seized with cold sweats, and died on the 12th day after he was attacked with the above-mentioned symptoms; 17 days after his admission into the hospital, and the 25th after the accident.

On dissection, the os frontis was found denuded for one-third of an inch from each side of the wound. The stroke of the sabre had only divided the external table of the bone. In the correspondent part of the  
internal



internal table, there was only a small fissure, scarcely perceptible. There was no effusion under the cranium; but the whole surface of the brain was covered with a greenish mucus. The small ulcerations were disseminated on the liver, the surface of which, throughout its whole extent, was covered with a stratum of yellow purulent matter.

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*Case of a bilious Erysipelas, from an internal Cause.*

# C A S E I.

[By Mr. DEHANNE, Surgeon to the Hôtel Dieu.]

A DELAIDE Goyde, 27 years of age, of a bilious temperament, for some days was affected with a violent pain in her head, ardent thirst, and difficult respiration. These symptoms were soon followed with an erysipelatous affection of the superior part of the face, particularly of the eye-lids, which could not be separated.

On

On her admission into the Hôtel Dieu, the tongue was furred, the mouth bitter, accompanied with a dislike to every species of food. To these symptoms there was a disposition to vomit, accompanied with considerable heat, with a pulse hard, frequent, and full.

The menses coming on at this period prevented the exhibition of farther medicines. Three days afterwards the patient was relieved by some bilious stools, procured by the exhibition of one grain of tart. emetic. in a pint of drink. The same remedy was repeated on the 5th day, when the swelling and redness had nearly subsided. Three laxative medicines finished the cure, composed of the pulp of cassia  $\mathfrak{z}$  i. manna  $\mathfrak{z}$  ij. tart. emet. g. i.

## C A S E II.

[By Mr. SIMONNEAU, Surgeon to the Hôtel Dieu.]

**F**RANCIS Coillet, 23 years of age, after exposure to cold whilst in a profuse perspiration, was attacked on the same day with an erysipelatous affection of the right side of the face. The violent



heat and pricking of the part induced him to apply for admission into the Hôtel Dieu, on the 8th of January, 1790.

Whey was prescribed as a drink, to which was added one grain of the emetic tartar. The same medicine, repeated the next day, dispersed the erysipelas, and by the 5th he was completely cured.

### C A S E   I I I .

[By Mr. CHORIN.]

**T**HERESA Marica, 48 years of age, was affected for some days with an erysipelalous affection of her left leg, accompanied with every symptom that indicated a derangement of the primæ viæ. An emetic was prescribed, which produced abundant evacuations. The erysipelas disappeared, and the patient was cured in 24 hours.

C A S E

## C A S E IV.

*Treated at first by topical Emollients.*

[By Mr. GIGNOUX, Senior Surgeon to the Hôtel Dieu.]

**F**RANCIS Liedard, 35 years of age, was affected with an erysipelas over the whole face, which he fomented for some days with emollient fomentations. The pain and turgescence increased, and the skin was covered with small vesicles.

When the patient was admitted into the Hôtel Dieu, the tongue was yellow, accompanied with frequent dispositions to vomit. A grain of tartar emetic was given in a pint of whey, which produced copious evacuations, and, by the 2d day, a sensible diminution of the symptoms. A purge was given, and the patient discharged cured by the sixth day.



## C A S E V.

*Of an ulcerated bilious Erysipelas.*

[By Mr. CHORIN.]

**J**ANE Lecat, 51 years of age, was admitted into the Hôtel Dieu on the 21st of November, 1789, for an erysipelatous affection of her face, which had been in a state of suppuration for 15 days. The parts in the vicinity of the ulcerations were red and disseminated with small vesicles.

The patient had no appetite, the tongue was furred, accompanied with a bitter taste in the mouth. A diluting drink was ordered, acidulated with oximel, to which a grain of tartar emetic was added. This woman was considerably better the next day. The emetic drink was repeated twice, and, by the 8th day, the ulceration and other symptoms had disappeared, without any topical application being employed.

CASE

## C A S E VI.

*Of an Erysipelas consequent to Wounds.*

[By Mr. VERGEZ, Surgeon to the Hôtel Dieu.]

MARY Framay, 60 years of age, was admitted into the Hôtel Dieu on the 7th of September, 1789, for an erysipelatous affection of the left leg. No topical application was applied. A grain of emetic tartar was exhibited, as the pulse was feverish, the tongue furred, and the mouth bitter. This medicine produced an abundant evacuation of bilious matter. This plan, continued for the first three days, did not stop the progress of the erysipelas, which now extended over the whole posterior surface of the leg.

The cicatrix of an old fore was at this time remarked near the malleolus internus, and seemed disposed to ulcerate. This circumstance induced a change in the treatment. The whole leg was covered with an emollient poultice, and the use of the emetic still persisted in. A slight suppuration took place in the fore, which ceased on the 12th day, and was finally cicatrized some days afterwards.



## C A S E VII.

[By Mr. BOUILLAUD, Surgeon to the Hôtel Dieu.]

**M**ARY Josepha Nengis, 44 years of age, was admitted, on the 9th of April, 1790, for a contused wound on the superior part of the right parietal bone. She left the hospital before her cure was completed, and was no sooner exposed to the impression of the air, than the small degree of suppuration furnished by the wound was suppressed. Fever and violent pain in the head supervened, which obliged her to return to the hospital.

A poultice was applied to the head, with a view of exciting a suppuration, and the parts affected with erysipelas were covered with compresses dipt in aq. veg. and a relaxing emetic drink prescribed.

A part of these symptoms subsided on the 2d day, and the patient was dismissed perfectly cured five days after the treatment.

## C A S E VIII.

*Erysipelas consequent to a Contusion, treated at first by Emollients.*

[By Mr. BOULET, Surgeon to the Hôtel Dieu.]

**D**ENIS Julia Moreau, 30 years of age, of a bilious temperament, excoriated her left elbow by a fall. The pain lasted only for a moment, and, for the space of six days, no alteration took place. At this period the inferior part of the fore-arm, and the superior part of the arm, was affected with erysipelas.

The patient applied poultices to the part, then emollient fomentations. The pain and swelling increased to such a degree, that the whole fore-arm, and one-third of the arm, in a few days, was swelled to a prodigious size. These symptoms, joined with a considerable degree of fever, determined her to apply to the Hôtel Dieu, on the 20th of February, 1789.

On her admission, the skin was tense, red, and glossy, and the cellular substance retained the impression of the finger. Independent of these symp-



toms, there was an evident fluctuation in different parts of the superior part of the fore-arm. A grain of emetic tartar was exhibited the next day, which cleared the primæ viæ. The abscesses were opened the same day, and the tumour dressed with a poultice moistened with aq. vegito. The erysipelas soon subsided; but the wounds from the abscesses, that had been opened, did not heal for the space of 20 days.

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### C A S E IX.

*Of an Erysipelas occasioned by the Application of fatty Substances to a contused Wound.*

[By Mr. DEVERS, Surgeon to the Hôtel Dieu.]

ROSE H. Bourbon, 30 years of age, had a slight contusion of the left arm, to which she applied fatty applications. Swelling of the parts took place, the integuments became tense, red, and shining. She was attacked with shiverings, and at intervals

tervals with shooting pains. The face became inflamed, the tongue dry, the pulse frequent, hard, and raised.

Bleeding was ordered, and a poultice, moistened with aq. veg. applied to the part affected with erysipelas. A diluting drink, and a proper diet, was ordered to be observed. In the course of the night the patient experienced a sense of nausea, the tongue became furred, with a bitter taste in the mouth.

A grain of emetic tartar, dissolved in a considerable quantity of drink, was ordered to be taken, which produced a considerable evacuation. This emetic-drink was repeated on the 3d day, and on the 4th the erysipelas subsided, and the patient was cured.

*An Account of three more Cases of Erysipelas, related in the Journal de Chirurgie, are omitted by the Translator, as the circumstances and mode of cure are nearly the same as in the cases above related.*



## OBSERVATIONS ON ERYSIPELAS.

The history of Erysipelas becomes an important consideration, when we reflect that the disease is extremely common, and that its treatment by many practitioners is purely prejudiced and empirical.

The Greeks admitting in their theories of medicines the metaphysical principles of philosophy, and the superstitious ideas of the Pythagoreans, respecting numbers, agreed in the existence of four elements, four radical qualities, four temperaments, and consequently four humours and four species of tumours, produced by stagnation, or a diseased alteration of the humours above-mentioned.

Phlegmon, according to their theory, was formed by the blood, erysipelas by the bilious, oedema by the pituitous, and schirrus by the melancholic or atrabilious temperament. But as this theory was often contradicted by observation, they were obliged to have recourse to the supposition of a mixture of the humours, by means of which tumours of a mixt description were formed; whence, no doubt, we derive the distinction of simple or true erysipelas, (produced merely by extravasation and deposit of the bilious humour under the skin:) from the compound or spurious, which took its name from the humour at  
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the time most prevalent; hence the names of phlegmonous, œdematous, schirrus, erysipelas, &c. .

Such is Galen's idea of this disease, and which has been repeated by almost all subsequent authors who have written on the subject of tumours. The celebrated La Motte, who criticised this theory in different parts of his work, did not dare to ridicule it openly.

Erysipelas, in general, is an inflammatory superficial swelling, not circumscribed, accompanied with lively heat and pungent pain. The whole extent of the part affected is of a bright red colour, clear and shining. This appearance subsides on pressing the part with the finger, and returns when the pressure is taken off. These characteristic marks agree with all the different sorts of erysipelas, but are variously marked, according to the different species.

The first, and most simple, is that mentioned by Sauvages in his Nosology, and Cullen in his First Lines, under the term of Erythema, from a word employed by Hippocrates in his Aphorisms, and in his *Coacæ Prænotiones et Epidemicæ*, to signify all the different species of erysipelatous affections.

But this word is not in general use, nor has it by any means a determinate signification: it appears to us, that the general name of Bilious Erysipelas, employed by many authors, would be more eligible.

In this kind of erysipelas the swelling is trifling, and often insensible, the skin of a rose-colour, generally a little verging towards yellow. The sensation that the patient experiences is neither tension nor pulsation.



sation, but a painful smarting, similar to what results from the application of hot water, or from exposure to the rays of the sun.

Towards the period of the invasion of this disease, and often many days before, the appetite is lost, the mouth bitter, the tongue moist, and covered with a yellow mucus. Nausea and sometimes bilious vomitings come on. The patient becomes weak and dejected, and is affected with wandering pains and considerable heat, without any particular dryness of the skin or violent sense of thirst. Sometimes the disease begins with fever, more or less violent, preceded by shivering and violent pain in the head.

This species of erysipelas is that which the ancients termed true, or bilious, erysipelas, or rather, properly speaking, erysipelas; and is that disease which, by some moderns, is called Simple Erysipelas.

This species, which we name Phlegmonous, corresponds to the phlegmonous erysipelas of the ancients, and is the same mentioned by Hevin in his Pathology, and by other modern elementary authors.

In this affection the skin is more raised than in the preceding species, the swelling harder and deeper, and of a deeper colour. There is generally a slight degree of tension of the integuments, with pungent pain, and at intervals pulsatory. On the first days of the attack of this disease, there is neither bitterness in the mouth nor nausea, the skin and tongue become dry, and are accompanied with a violent  
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sense of thirst; the pulse is full and hard, indicating plethora.

At the expiration of a few days, particularly when the disease has been treated by bleeding and an antiphlogistic regimen, the tongue becomes foul and moist at its edges, bitterness of the mouth and nausea supervene, and the disease, in its progress, offers nothing to distinguish it from bilious erysipelas.

All the different kinds of erysipelas may be classed under these two heads, and we may judge from the state of the primæ viæ under what class they should be arranged. There is, however, a species of erysipelas different from the rest, that requires local treatment, though the symptoms are by no means extraordinary. The species we allude to is consequent to wounds, contusions, &c.

The danger of every species of erysipelas is proportioned to its extent, to its intensity, and to the part affected; but the most dangerous of all is that which affects the head and the adjacent parts. This remark has been repeated, after Galen, by Ætius, Paulus Eginetus, Oribasius, &c. These authors are even apprehensive, that, in such cases, suffocation may take place, from an obstruction in the respiratory passages.

An erysipelas of the uterus is deemed, by Paré, a mortal disease; and Hippocrates has formed a prognostic equally unfavourable of the erysipelas which disappears suddenly from the surface of the body, to affect the internal parts.

Obstinate



Obstinate ulcers, and even gangrene itself, have been mentioned by the ancients as the frequent result of erysipelas: though, it is probable, these circumstances may be attributed with more propriety to negligence and unskilful treatment than to the nature of the disease. This remark is equally applicable to those erysipelatous affections attendant on wounds, ulcers, fractures, and luxations, whose consequences have been described by authors as extremely formidable.

The treatment of erysipelas has varied materially at the different periods of the medical art. Celsus recommended bleeding indiscriminately in every species, when the strength would permit. *Ætius*, who founded his opinion on the authority of *Galen*, never employed the lancet but in cases of manifest plethora: the bilious erysipelas he treated by purgatives. *Paulus Eginetus*, on the contrary, never exhibited them, but when, from some obstacle, he was prevented from ordering bleeding; a practice which, like *Galen*, he recommended as a general precept. *Oribasius* recommends medicines proper for the evacuation of the bile: *Avicenna*, in adopting this last method, observes, that bleeding is rarely useful, sometimes hurtful; and yet, at the same time, admits that there are cases where it is indispensable.

*Actuarius* has made nearly the same remarks as *Avicenna*, and, besides, extends the use of purgatives to every species of inflammation. *Gui de Chauliac*, *Thévenin*, *Munnick*, *Sydenham*, &c. prescribe bleeding in all species of erysipelas, unless the affection

is extremely slight. In this opinion they are followed by a crowd of moderns, some of whom, influenced by the inspection of the blood when it presents what they term a plethoric or inflammatory crust, order the bleeding to be repeated three or four times.

Thévenin sometimes prescribed a gentle emetic, but not till after other means had been unsuccessfully tried.

Paré has remarked, that the disease generally terminates by vomitings and bilious dejections; but at that time the stibiated tartar was not in use; a medicine admirably calculated to accelerate this termination: and now, though the effects of this remedy are known, yet many practitioners are afraid to employ it. Stoll himself never prescribed it, without the patient being previously prepared.

Richter, the celebrated professor of Gottingen, and one of the most judicious German authors, recommends the exhibition of an emetic on the first attack of a bilious erysipelas. He admits that there are cases, though extremely rare, which require bleeding in the first instance.

Cullen proposes cooling purgatives in addition to these means, and coincides with the method employed by Sellé, who, viewing erysipelas as a species of putrid fever, joins to evacuants the use of bark, wine, and other antiseptics.

Bell treats this mode of practice, and the opinion on which it is founded, as purely hypothetical. He prefers the anti-phlogistic regimen and bleeding, but  
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by no means local, as it is generally productive of ulcers difficult to cure. The ancients appeared to attribute much efficacy to bleeding and the use of purgatives, and even still more to topical applications. Some recommend the use of diaphoretics and sudorifics; whilst others, and indeed the greatest number, prescribe relaxing, refreshing, and diuretic, drinks.

Alexander of Tralles, after the doctrine of Galen, prescribed only cold water to his patients. He recommended them to breathe fresh air, and to be slightly clothed; and observes, with great judgement, that this is the plan that nature seems to point out, and supports the propriety of this method by cases peculiar to himself.

Paré also attributed some advantage to fresh air, to which he joined the use of cooling medicines, &c. Sydenham, with the same views, prescribes the use of small beer. Others recommend weak red wine and water. Thévenin treats obstinate erysipelatous affections by means of baths, whey, veal-broth, and cold mineral waters.

Topical applications have been for a long time in general use for the cure of erysipelas; nevertheless, Hippocrates, who speaks frequently of this disease, and who relates many cases of this description in his epidemics, says nothing to induce a suspicion that he ever had recourse to local applications. The practice of modern physicians has differed materially; they have been diffuse in the use of liniments, fomentations, poultices, and even ointments of every description.

description. It was soon remarked, that oils, ointments, plasters, and all fatty substances, were pernicious in the treatment of erysipelas. Galen made this remark; which, however, did not prevent the use of the emp. diapalma dissolved in oil of roses. Fabricius Hildanus has seen the use of the oil of roses, continued for some days, produce gangrene, in a case of phlegmonous erysipelas. Munnick quotes this case, and Manget reports it at length. The medicaments of a benumbing and narcotic quality, recommended by Galen, Paulus Eginetus, and many others, have also tended to produce mortification.

Resolvents and repellents have been generally recommended. All authors, however, agree, that their application is not unattended with danger: for, independent of the fatal consequences sometimes produced by metastasis, induration or gangrene of the part affected are often occasioned by their indiscriminate use. A conviction of the truth of this remark induced Paulus Eginetus to reject astringent and spirituous applications, and Avicenna to prefer the effusion of cold water on the part to more active applications. For the same reasons oxycrate, a boasted remedy among the Greeks, was preferred to weak solutions of lead, as recommended by Thévenin, and the different infusions of elder-flowers, melilot, and other similar plants, were even in more general use.

De Haen employed a decoction of elder-flowers in whey: sometimes emollients, as warm water, marsh-mallow-water, water of frogs spawn, &c.



Hartman attributes the most serious symptoms, and even mortification of the part itself, to this last application. Celsus used cataplasms covered with compresses, moistened with cold water. Galen rendered them resolute by the addition of oxycrate. Paulus Eginetus recommended a poultice of barley-meal; Thévenin one made of rye boiled in lime-water; and Diembroek one composed of bean-meal and oak-leaves reduced to a powder. But it is superfluous to dwell longer on methods that have proved inefficacious, and which have been long since abandoned.

Cullen, concurring in opinion with all accurate observers on the inutility and danger of every topical application, absolutely rejects them. He allows, however, the part affected to be sprinkled with powdered starch, (a practice lately adopted in England,) to absorb, according to Mr. Bell, the acrid humour which is furnished, and which tends to produce ulceration.

Without doubt chalk has been employed by some practitioners to answer the same indications.\*

Bell, who perfectly accords with Cullen with respect to the injurious effects of local applications, yet permits a thin layer of the extract of Saturn to be applied to the part by means of a feather, when the pain is very acute.

Richter, so far from approving this practice, views the extract of Saturn in the same light as other a-

\* V. J. Munnick, Chir. lib. i. Manget. Bibl.

stringents, which, he observes, often produce fatal consequences. This learned professor, like Sellé, Stoll, and other skilful practitioners, makes use of no application whatever to the part. Actuarius observes, also, that local applications are useless in erysipelas, and that the inflammation will subside by the use of cathartics alone.

Independent of the means we have pointed out, there was one mentioned by Thévenin, which, during his time, was in very general use: this was the application of blisters. He proposed them with the view of evacuating, or at least diverting, the erysipelatous humour, when they were applied at a considerable distance from the part affected.

This recalls to our recollection a case mentioned by Alix, in his *Observata Chirurgica*, fasc. iii. where blisters were applied to the legs of a peasant, for a wandering and obstinate erysipelas, which had successively occupied the back, the thorax, and the face. The erysipelas attacked the feet, and was immediately followed with gangrene.

Such is the abridged history of what has been written on the subject of erysipelas. The means related for the cure of the disease may perhaps appear in some degree tedious; but they are more important to recollect than theoretical distinctions of the various species of erysipelas.

With respect to the particular method employed in the Hôtel Dieu, although sufficiently explained in the cases preceding these observations, we shall recapitulate the plan, to enable the reader to com-



pare our mode with the methods employed by others.

In the bilious erysipelas, whatever degree of heat or fever may exist, we give, in the first instance, a grain of emetic tartar dissolved in a considerable quantity of fluid; the symptoms generally diminish as soon as the effects of the medicine have ceased: we have seen them entirely subside, although the medicine produced no other sensible alteration, in the animal economy, than an increase in the secretions of the insensible perspiration and urine: sometimes the symptoms resist these evacuations, and we are obliged to have recourse once or twice, or even more frequently, to the use of the emetic-drink. When the erysipelas is cured, and the bitterness in the mouth and fever has subsided, two or three purges of cassia and manna, with a grain of emetic-tartar, are exhibited: during the process of the cure the patient is ordered to drink freely of a diluting ptisan, acidulated with oxymel: as soon as the symptoms are mitigated the diet of the patient is enlarged; for, when it is too rigidly observed, the acrimony of the humours are apt to be increased, and the bilious erysipelas to be reproduced, particularly in hospitals, where the air, generally speaking, is unhealthy.

The bilious erysipelas, however considerable its extent, and whatever part it may occupy, yields, in a few days, to the plan we have laid down; and, in the end, we have always succeeded in the cure; nor do we recollect an instance of its return. We have invariably observed that the cases of the patients, who  
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had been bled previous to their admission into the hospital, were more serious and obstinate, particularly when it had been frequently repeated.

The same practice is not applicable to the phlegmonous species of erysipelas: in this kind, emetics and other evacuants augment the irritation and tension, already considerable, nor should they be had recourse to till the plethora and irritation of the patient is diminished by one or more bleedings, according to the urgency of the symptoms and the strength of the patient. The bilious erysipelas, that then appears, points out the necessity of evacuation and the proper time for their exhibition. During the whole treatment the patient takes nothing but a diluting drink, such as whey, or a simple decoction of dog's tooth with oxymel.

When erysipelas arises from an internal cause, we do not employ any topical application whatever in either species, but leave it, as much as possible, exposed to the air.

But when either bilious or phlegmonous erysipelas is consequent to a contusion-wound or an ulcer, regimen and internal medicines are insufficient, unless topical applications are employed to abate the local irritation, and to excite suppuration: with this view cataplasms have been employed, and their good effects have been remarked in a great variety of cases: but we deem this a caution essentially necessary to observe, that the application of the poultice should not extend much below the contused surface or the edges of the wound. If any application is permitted to lay on the



rest of the erysipelatous surface, it should be aqueous and weak, such as the aq. veg. min. in common use, made in the proportion of 3 j. of the extract of Saturn to a pint of water.

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*Case of a spurious Aneurism of the Brachial Artery.*

[By Mr. CAGNION.]

A Child, six years old, had the brachial artery opened, in bleeding from the basilic vein. The hemorrhage was considerable; and the surgeon experienced great difficulty in stopping it by means of compression. The blood, however, was retained; but a tumour formed an inch and a half in diameter at the part where the patient was bled; it was treated as a common abscess, and maturing applications employed: an opening was proposed to be made, when Mr. Cagnion was consulted for the first time; who, from the characteristic symptoms, was satisfied it was a case of spurious aneurism. The parents were frightened, and consulted many other professional men, who concurred in the same opinion, and who all agreed that the operation was necessary.

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Mr. Cagnion was desired to perform it; but, conceiving that the operation might be had recourse to as a last resource, advised that the effect of compression should be previously tried, as no danger could arise from the attempt.

The parents, uneasy from this difference of opinion, took the child to Paris, where they consulted Mr. Ferrand, who was decidedly of opinion for the operation to be performed. Mr. Louis was consulted, who agreed in opinion with Mr. Cagnion, to whose care the patient was again consigned.

Mr. Cagnion placed a pad, moderately firm, as a point of support, at the posterior part of the arm and fore-arm, then applied graduated compresses on the tumour, and a bandage similar to what is used in bleeding, excepting that the turns were more numerous.

The patient wore this bandage for a year; at the end of which period, the tumour had entirely disappeared; and the child, who is now between fifteen and sixteen years of age, enjoys the most perfect state of health: the affected arm is now of the same size and equally strong as the other.



*Case of a radical Cure of a Hydrocele, subsequent to considerable Inflammation and Formation of Matter in the Tunica Vaginalis.*

[By Mr. BOULET, Surgeon to the Hôtel Dieu.]

**M.** BOUET, a husbandman, 42 years of age, and of a good constitution, had been affected with a hydrocele for the space of twelve years; it was of a considerable size, and was originally occasioned by a contusion of the left testicle. Wearied with unsuccessful endeavours to cure his complaint, by the application of powerful resolutives, he was determined to leave off all remedies whatever.

In the month of September, 1790, he had occasion to go to Paris: when he consulted the surgeon-in-chief of the Hôtel Dieu, who punctured the tumour, and drew off at least six pints of water. As the testicle was undiseased, rest and the use of a suspensory bandage were only recommended. These precautions he had the imprudence to neglect; for, as soon as the operation was over, he walked more than eight leagues.

In the evening, on going to bed, he felt a slight degree of pain, which progressively increased in the night; and, the following day, the fever and swelling augmented

augmented in the same proportion; and, on the third day, he was conveyed to the Hôtel Dieu.

The testicle, which was hard and extremely painful, formed, with the scrotum, an oval tumour; the long diameter of which was four inches and a half, and the short diameter three inches: the spermatic cord was swelled as high as the abdominal ring; and, when the tumour was not suspended, the pain was prolonged to the abdomen and loins. The surface of the scrotum was tense, and of a shining red colour: the face was inflamed, the pulse hard, full, and irregular; the skin of a burning heat; the tongue dry, accompanied with ardent thirst.

These last-mentioned symptoms were calmed by the following treatment: a copious bleeding was prescribed, with the observance of a rigid diet; three pints of a diluting liquor, acidulated with sirup of lemon, were ordered for a common drink; and a suspensory bandage for the testicle, which received an additional support, from allowing it to rest on a small pillow placed between the thighs.

The next day the bleeding was repeated, and the same plan observed as the preceding day. By the 5th day, the fever had subsided, the cord was more free, and the pain considerably less, though the swelling of the scrotum remained nearly the same.—He was allowed to take some weak soup.

The patient remained much the same till the 14th, when, in the evening, he had a shivering fit, followed with a slight degree of fever: the tumour was attended with no pain, but still retained the same bulk; a fluctuation,



fluctuation of a small quantity of fluid was now felt at its anterior part. The fever, preceded by shivering, returned as before on the 16th day; the access was slight; but, two days afterwards, it returned with more violence, and lasted for a longer time.

From the bitterness in the mouth, the appearance of the tongue, &c. it was thought expedient to exhibit the emetic-drink, in which one grain of the emetic-tartar was dissolved: this medicine produced some vomitings and bilious stools. The accession of shivering and fever returned twice more, but with little violence; the last attack was indeed scarcely perceptible.

On the 25th, a bilious diarrhœa came on, which for some days increased. He became uneasy, restless, and truly miserable, from the apprehension of losing his life, and, consequently, leaving a large family, of which he was the only support, to misery and want. — The diarrhœa ceased spontaneously; the urine became thin, and the inferior extremities œdematous.

On the 38th, the urine was almost totally suppressed, and the inflation had affected the thighs and scrotum, notwithstanding the use of an aperient ptisan, sweetened with the sirup of the five roots.

The urine flowed more abundantly the following days, and the patient soon regained his tranquillity. The urine was now discharged plentifully, and sometimes even involuntarily: each day he had five or six bilious stools; the swelling of the legs and thighs soon

soon disappeared; and the scrotum remained only affected.

On the 52d day, a small excoriation was remarked, situated on the anterior and nearly inferior part of the scrotum, from which oozed a considerable quantity of serosity.

On the 56th, the infiltration in the scrotum was dissipated, and an extensive fluctuation felt at the anterior part of the testicle. Three days afterwards an eschar, that occupied the excoriated part, sloughed off and exposed a small orifice at the bottom of the ulcer, which constantly discharged a kind of limpid serosity that became white on pressure. A probe was introduced, by this aperture, into the cavity of the tunica vaginalis; a director was then passed, and the tunic divided from above downwards: at first a small serous discharge took place, which was followed by a considerable quantity of pus: a small slip of linen was introduced into the wound; the edges dressed with lint, and a poultice applied over the whole. The same dressing was continued the following days.

The testicle, which was hard and large, gradually diminished; the discharge, which, for the space of thirteen days, had been extremely abundant, lessened considerably; and the cavity daily decreased in size. Thirty-six days after the operation the wound was closed by a cicatrix, that apparently adhered to the body of the testicle, to which a soap plaster was applied, with a view of removing some little remaining induration,

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The patient was discharged the hospital, perfectly cured, on the 131st day after his admittance ; and, on the 67th, from the opening of the abscess, there was a little remaining thickness in the cellular substance ; but the testicle was reduced to its natural size.

The hydrocele has never since appeared, nor is there any reason whatever to apprehend a relapse.

The feelings of this patient's mind considerably influenced his disease ; but to what degree the symptoms were particularly affected is perhaps difficult to determine.

We have one important remark to make, which is, that the health of the patient never improved till the surgeon-in-chief persuaded him that his disease was by no means important, treated it with apparent indifference, and intrusted him to the care of an assistant.

This fact, and many others of a similar description, which daily present themselves to our observation, may serve for the subject of a distinct essay on the influence of the mind on the body when in a state of disease, and on the conduct that a philosophical surgeon should observe in modifying and regulating the too-dangerous activity of the imagination.

*Case of a Caries of the sternal Portion of the Clavicle, of the cartilaginous Portions of the first three Ribs, and of the upper Part of the Sternum.*

[By Mr. SIMONNEAU, Surgeon to the Hôtel Dieu.]

MARGARET Blet, 56 years of age, and of a weak constitution, about the middle of the year 1788, having occasion to lift down something that was placed beyond her reach, felt, at the moment, a violent pain in her left breast, from the extraordinary exertion she made in stretching her arm. A short time afterwards the breast became swelled, hard, and painful, and resisted every effort of art and empiricism.

The tumour, at length, disappeared; but soon afterwards another swelling was observed at the articulation of the left clavicle with the sternum; the pain of which increased in proportion to its progress. An abscess was formed which discharged a quantity of bloody and black serosity from a fistulous opening.

The patient, whose general health was exhausted by a variety of putrid complaints, with which she had been afflicted at different times, in addition to habitual colicky pains and the weakness consequent to an abundant discharge, applied to the Hôtel Dieu. On examination with a probe, the sternal portion of the left clavicle, and that part of the sternum connected with it, was found in a state of disease: the bone was exposed,



posed, by the application of a piece of lapis infernalis to the fistulous orifice; and, as soon as the eschar separated, the ulcer was covered with an emollient poultice.

On the 8th day, the patient was seized with considerable fever, with a wandering pain that occupied the whole left side of the breast: two days afterwards the breast began to swell again. When the slightest degree of pressure was employed, a considerable quantity of matter was discharged from the fistulous orifice, which led to a suspicion that there was a communication between the two abscesses.

The patient died on the 12th day after her admission. On opening the body, a discharge of a steatomatous matter took place from the left breast; and the cartilaginous portions of the three first ribs, the head of the clavicle, and the correspondent portion of the sternum, were destroyed by caries; but no communication was discovered between this part and the breast: considerable adhesions of the pleura had taken place opposite the parts affected. There did not occur any thing worthy of remark in the inspection of the thoracic and abdominal viscera.

*Case of a penetrating Wound in the Thorax with an Injury of the Lung.*

[By Mr. HOISNARD, Surgeon to the Hôtel Dieu.]

NICOLAS Didier, a soldier, 23 years of age, was admitted into the Hôtel Dieu on the 3d of August, 1790, for a wound he had received from a foil, the button of which had fallen off: it was situated one inch above the right breast, and the orifice was covered with florid frothy blood, the spittle was tinged with blood, and the respiration laborious: the opening was enlarged, which gave issue to a considerable quantity of grumous blood: a small slip of fine linen was introduced, and the edges left out of the wound: lint was applied to the surface, and the whole covered with a poultice. The patient was bled at the arm, and put to bed on the affected side. The next morning the pulse was hard and raised, and the heat considerable: the spitting of blood and difficulty of respiration were nearly the same. A second bleeding was prescribed, and no advantage derived: in the course of the two following days, the same evacuation was repeated four times, and the symptoms ceased by degrees; but these favourable circumstances did not continue long; for, on the 7th day, the patient, conceiving himself out of danger, contrived to procure some food, which he devoured with great eagerness. The next day he complained



plained of a sense of weight in the region of the stomach, with an access of fever: the skin was hot, and the tongue furred. A grain of emetic tartar, dissolved in a considerable quantity of fluid, was given: it procured some stools, and the symptoms soon disappeared.

On the 12th day, he was indulged with some light food, and in small quantities. The wound soon cicatrized, and the patient was dismissed the hospital perfectly cured on the 20th day after his admission.

*Case of a Wound in the Head by a Pistol-shot.*

[By Mr. GIGNOUX.]

**N**ANETTE Rose, 18 years of age, of a weak constitution, and subject to epilepsy, received a shot from a pistol in the head as she was crossing the gardens of the Tuilleries. The ball passed perpendicularly through the soft parts above the right temple, and was stopped by the cranium. The girl was stunned by the blow, and fell down: she got up, however, without assistance. A considerable quantity of blood escaped from the wound, though it was exactly filled up by the ball. A surgeon, who happened to be

he near the spot, extracted the ball, which he experienced some difficulty in effecting, from its being covered by the edges of the wound, and surrounded with coagulated blood. The wound was cleaned, and the hair extracted that had been driven in by the ball: it was dressed with linen, dipt in salt and water.

The patient experienced no serious symptoms till after the ball had been extracted: she now became senseless and drowsy, with a sense of weight and violent pain in the head: the arms and legs became senseless and weak.

She was admitted into the Hôtel Dieu on the 31st of March, 1788. Mr. Default enlarged the opening; and, after the most attentive examination, could discover neither fracture or depression: that part of the bone was found only denuded which stoppt the progress of the ball. As the wound still discharged blood, it was dressed with lint, sprinkled with colophony: the patient was put on strict diet, and ordered a diluting drink, acidulated with sirup of lemon.

The next day the symptoms were not diminished; the patient was feverish, the pulse hard and frequent, the wound painful, accompanied with swelling of the surrounding parts. The wound was now dressed with the linimentum arcae, and the whole covered with a poultice, moistened with the aq. vegeto. min.

On the 4th day, the pulse was softer and less frequent, and the pains were evidently diminished: the ecchymosis some days afterwards disappeared, the wound



became red and healthy, and afforded an abundant discharge of well-conditioned pus.

The drowfiness and giddiness disappeared. The patient experienced in the sequel no other symptoms than slight pains in the head, which recurred at long intervals.

No exfoliation of the bone took place; the part was soon covered with new-formed flesh, and the size of the wound considerably diminished.

By the 17th day, the ecchymosis had entirely disappeared, and, the suppuration being trifling, compresses dipt in the aq. veg. min. were substituted for the poultice. The pain in the head returned two days afterwards with extreme violence, particularly on that side where the wound was received.

From the 22d to the 23d, the patient had two violent attacks of epilepsy, the granulations became pale and exuberant, and required the application of the lapis infernalis. From this period no other dressings were employed but dry lint, and compresses dipt in the aq. veg. min. During the remainder of the treatment, no other symptoms occurred than three attacks of epilepsy and a diarrhoea, which was checked by the use of decoction of rice, sweetened with sirup of quinces; and, in 44 days subsequent to her admission, she was discharged the Hospital perfectly cured.

*An Extraët from the Works of M. J. Van Wy, Surgeon, of Amsterdam, taken from the 8th Volume and the 1st Part of the Bibliotheque Chir. of Richter, by M. Brewer, M. D.*

# C A S E I.

**A** Man, 38 years of age, had a salivary fistula, which resisted every method employed for its cure: he lost successively all the teeth of the lower jaw; the gums swelled, became painful and bloody, and at length separated, and completely exposed the maxillary bone. A necrosis of part of the lower jaw was then expected, but the total loss of this bone was an unlooked-for event, particularly as neither suppuration or inflammation had sensibly affected the contiguous parts.

When the patient had remained some time in this situation, a very considerable portion of the bone was thrown off; afterwards, many smaller pieces were extracted at different times, so that at the end of three months the whole inferior jaw had been removed. During the time that this separation was taking place, a new jaw was observed to be forming in the same shape as the original one: at first it had only the consistence of leather, but it hardened in the sequel to that degree that the patient was capable of masticating solid food. The chin appeared more short and rounded



than in its natural state, nor was the jaw of its natural degree of width, so that the anterior part was not exactly applied against the teeth of the superior jaw.

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## C A S E II.

**A** Man, 70 years of age, felt, for a considerable length of time, a deep-seated pain in the left side of his face, (and particularly along the lower jaw,) accompanied with inflammation and swelling: these symptoms were immediately consequent to the extraction of one of the dentes molaris in a state of caries. General means were employed, which only mitigated the symptoms for a time, for the pain soon re-appeared, and, at the angle of the lower jaw, an inflammatory tumour was remarked: an abscess then formed, and, when opened, the bone was found carious to such a degree, that exfoliation was expected. The pains increased, an obstinate salivation came on, the left half of the jaw was denuded, and fell entirely off. This portion of bone was afterwards regenerated, gradually increased in hardness, and exactly adapted itself to the sound portion of the jaw.

OBSERVATIONS *by the* EDITOR.

Mr. Van Wy observes, that, in the two cases just related, the bone was regenerated, and that it hardened by degrees, subsequent to the separation of the original portion; and other practitioners appear to have made the same remark.\* We do not mean to contest the fidelity of the facts, as they are related by such a judicious practitioner as Mr. Van Wy; but, reasoning from analogy, we are authorised in doubting that the processes of regeneration and hardening take place in the gradual manner mentioned by the author. In fact, we have invariably observed, with respect to other bones, that regeneration and induration precede the throwing off of the exfoliated portion, which serves for a mould to the new-formed bone. The case of Mr. Boulet, inserted in the first volume of the Journal, and indeed all other cases that we have seen of necrosis of the lower jaw, confirm the propriety of this reasoning.

\* See Bordenave on the Necrosis of the Lower Jaw. Académie de Chir. tom v.



*Case of a Wound of the Leg with a Division of the  
Tendo Achillis.*

[By Mr. PEZARD, Surgeon to the Hôtel Dieu.]

**J.** Baptiste Lavigne, 30 years of age, in descending into a cellar, without a light, on the 4th of October, 1790, struck the posterior part of his leg against the cutting edge of a saw, which completely divided the tendo Achillis about two inches above the heel. He was carried directly to the Hôtel Dieu, and, on examination, a transverse wound was found two inches in length, with the edges a little separated: on extending the limb forcibly, the extremities of the tendons were brought in contact; but, when the limb was bent, they separated for more than two inches. The plan of treatment was as follows:

An assistant kept the foot completely on the stretch, with the leg slightly bent; and, after cloths dipt in aq. veg. min. were applied to the wound, a long compress was placed under the foot and behind the leg, extending from the extremities of the toes above the ham. This compress was two inches and a half in width, and the little vacuities in the vicinity of the tendon were filled up with lint, &c. A bandage, two inches in width and four ells in length, was applied in the following manner:—Some circular turns were first passed round

round the foot, near the toes; the end of the long compress, next the heel, was turned back, and secured in that situation by some turns of the bandage, which covered the whole foot, and was passed above and below the divided parts in such a way as to approximate their edges: the rest of the bandage was expended on the whole leg and inferior part of the thigh, as high as the upper end of the compress, which was doubled back, and secured like the lower end. The limb was then placed on a pillow, and disposed in such a manner as to relax the posterior muscles. The pain of the wound subsided after the patient was bled twice, and a diluting regimen observed for some days. As no circumstance occurred to indicate the necessity of removing the dressings, they were suffered to remain on till the 10th day, when a great part of the wound was found cicatrized. The same dressings were applied, nor removed till the 24th, when the parts were completely united. The patient began from this period to raise and support himself on crutches; he walked with great ease by the 36th, and would have been dismissed the Hospital at this time, but was prevented by a small abscess that formed in the heel, which detained him 15 days longer.



OBSERVATIONS *on the Division of the Tendo Achillis,*

The division of the tendo Achillis, by a cutting instrument, is by no means a rare occurrence: there are many cases to be found in French, English, and German, authors. The rupture of this tendon, by a violent effort, is even more frequent,\* though it seems to have been unknown to the ancients, and even denied by many of the moderns. This rupture is not, however, difficult to distinguish, as the tendon projects considerably under the skin, and can be felt nearly throughout its whole circumference. This solution of continuity cannot escape the researches of the surgeon, though concealed from his view, for there is always a considerable depression between the divided extremities, which is encreased by bending the foot, and diminishes, and in fact nearly disappears, by extension. The patient is unable to support himself on his leg, though capable of extending it by the action of the tibialis, posticus, and peroneus, muscles, agreeably to Mr. Petit's remark.

The ancients generally formed unfavourable prognostics of wounds of the tendons: the greatest part conceived them equally dangerous with wounds of the nerves, with which these parts were for a long time confounded. Gui de Chauliac repeats, after the Greeks

\* Monro mentions sixteen cases.

and Arabs, that injuries of tendinous parts produce the same symptoms as when the nervous parts are affected. Barbette observes, when describing the considerable tendon inserted into the os calcis, (that is to say, the tendo Achillis,) that, when this part is wounded or severely bruised, convulsions often supervene, and even death itself. The opinion of La Motte is equally unfavourable; for he remarks, that wounds, abscesses, and indeed all accidents that affect the tendo Achillis, are generally so extremely dangerous, that a favourable termination cannot be expected.

Subsequent observers have not formed the same serious prognostics, nor have their patients experienced the inconveniences above-mentioned, but have been all cured with a success proportioned to the means employed. From these circumstances, may we not justly infer, that the treatment of the ancients was the principal source of the accidents they describe?

Sutures, at this period in general use, in these sorts of wounds, were the only means opposed to the contraction of the muscles; for, the advantages resulting from an appropriate bandage, and a proper position of the limb, were at that time unknown. If, to these obstacles, we add the abuse of repellents, plasters, and the application of fatty substances, we have no reason to be surpris'd, that a method, so contrary to every rational indication, should be followed with abscesses, convulsions, gangrene, and even death itself.

The future of tendons was a practice reprobated by Ambrose Paré as extremely dangerous, and became in disuse for a considerable time; it was revived again

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at the end of the last century, by Mr. Bienaife, surgeon, at Paris, who, at that time, passed for the inventor.

La Motte employed the future in a case where the tendo Achillis was completely divided by a cutting instrument, but its successful termination was certainly not to be attributed to the future, the effect of which was rendered nugatory, by the foot being preserved in an extended position, and a proper bandage employed. This practitioner is himself aware of the danger attendant on futures, unaided by other means, as bandage, position, &c. He treated a case of partial rupture of this tendon by the application of a dressing, which preserved the extension of the foot. When mentioning some cases that he had successfully treated, he recommends incision of the integuments, and future in cases of partial rupture of the tendon. This author was, however, acquainted with Petit's method, and the case of the *Sieur Cochoix*, a famous leaper, which occasioned so much conversation, and produced so many disputes, at the beginning of this century.\* He praises highly

\* The case alluded to is thus related by Mr. Petit, in his *Traité sur les Maladies des Os*:

“ The *Sieur Cochoix*, one of the most active leapers in his troop, broke the two tendons of Achilles in a leap he took, with his feet close, upon a table, three feet and a half high, without making any external wound. This rupture so happened, that the muscles of the calf of the leg carried away on their side the greatest part of the tendons, and the heels retained the rest. The part which remained at the right heel was above two inches long; and that attached to the left but twelve or thirteen lines. The broken ends were sufficiently distant to admit three fingers in the space  
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highly the treatise on the diseases of the bones, where this method is described.

La Motte, among the French, is one of the last who defended the practice of sutures in wounds of the tendons. Since this time, the different works of Pibrac, Lafaye, and Dionis, have fixed immutably the practice in this particular.

Paré, who had occasion to treat a wound of the tendo Achillis, employed no particular dressing to keep up the extension of the foot; for, probably, he was unacquainted with the necessity. He also candidly acknowledges, that the wound was a long time consolidating, and that, after cicatrization, it broke out afresh on the patient's walking.

Petit was more fortunate, by remarking, that the extension of the foot brought in contact the ends of the divided tendon, and consequently he adopted the plan of preserving this extension during the whole treatment, by an appropriate dressing, after the application of a circular compress on the wounded part. He retained the foot in a convenient position, by a second compress, secured by a bandage, under the sole of the foot, and along the posterior part of the leg, from the toes as high up as the ham. The ends of this bandage were turned back, and secured by pins, and a few more turns of the roller.

“that was left between them.—I dressed this wound till a perfect cure was obtained, and the case appeared to me, from its singularity, to merit the attention of the public.”

For the particular treatment, the reader is referred to the original work.

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He begun rolling the bandage on the place where the wound was received; and, like the ancients, passed many turns over this part; it was then continued down to the end of the foot; then, by reversing the bandage, was reflected upwards as high as the ham, afterwards carried downwards again, and secured to the ends of the compress.

This dressing was simple and ingenious, though it admitted of improvement. At this period, machines were much in vogue; and Petit himself, influenced by the prevailing taste, substituted, for his bandage, his famous slipper, a contrivance too much extolled by some and too much decried by others: perhaps the only advantage it may possess, superior to the bandage first invented, is, that it keeps the leg bent on the thigh, and produces, by this means, a relaxation of the *gastrocnemii* muscles, which could have been equally well effected by securing the compress posteriorly, by a bandage passed above the ham: this plan is preferable to the machine, as, by the regular compression it produces, relaxation and swellings are prevented, the necessary consequence of a limb remaining in a state of inactivity, when methodical compression is omitted. We must, however, admit that this bandage is subject to the inconvenience of pushing in the tendon, which, projecting more than the surrounding parts, is more compressed by the application of the circular bandage, and is apt to agglutinate with those parts against which it is pressed, by which means the motility of the tendon is lost; but it is easy to prevent

prevent this pushing-in of the tendon, by attending to the general rules that regard the application of bandages, which teach the necessity of placing linen, tow, &c. in depressed and hollow parts, in such a manner as to bring them on a level with the projecting portion.

This was doubtless the object that Messrs. Gauthier and Duchanoy had in view when they proposed filling up the vacuities, in the lateral parts of the tendon, by means of graduated compresses;\* which, by compressing the sides of the tendon, retained it backwards, and shared, at the same time, the pressure of the bandage.

Mr. Duchanoy substituted a simple sock for Petit's slipper, to which there was a ribbon, intended to be secured to the bandage at the inferior part of the thigh.

The machine invented by the celebrated Monro, for his own use, is nearly the same as Petit's, but less perfect in its construction; for, instead of mounting above the knee, to keep the thigh in a state of flexion, it terminates at the upper part of the calf, where it is secured by a kind of spatterdash.

Dr. Monro could not endure the pressure on his toes, occasioned by the slipper, and was obliged to open it at its anterior part. Fielitz had recourse to the same expedient to render this machine supportable to a patient whose tendo Achillis was almost totally di-

\* Vide Journal de Med. vol. xlii. & xliii.



vided by the wheel of a mill, which bent the toes so much that they nearly touched the tibia.\*

Monro, obliged to travel on horseback before union was perfected, invented another machine, which he applied over the stocking he ordinarily wore. Bell has described this invention, as well as the slipper, in his *System of Surgery*, in which there is an engraving of the instruments, after Monro's description in the *Edinburgh Medical Essays*. This machine consists of a stalk, strait and inflexible, terminating at each side by two plates of beaten iron, bent in such a direction that one should embrace the middle part of the back of the foot, and the other the fore part of the leg, towards its inferior third portion. This instrument was secured to the leg and foot by two leather straps, passed through two rings made in the iron plates. A third leather thong depended from the stalk, which passed in a stirrup against the anterior part of the shoe-heel, and retained posteriorly by a ribbon, which embraced the posterior part of the heel. The machine thus secured prevented the flexion of the foot completely.

Schneider successfully employed a similar plan, but more simple, in the case of a young girl, who had the tendo Achillis cut by the edge of a vessel.† This practitioner, during the whole treatment, kept the foot in a state of extension by means of a strong

\* Fielitzen's *Beobachtungen*, &c. vide *Bibl. Chir. Richter*, vol. viii. p. 520.

† Vide *Richter*, vol. viii. p. 729.

splint, which was extended on the anterior part of the leg, reaching from the toes up to the knee.

This plan is ingenious, and may be of great use in extraordinary cases, if, instead of a splint, a piece of iron was substituted, constructed of a proper form, with the inside lined. This instrument is not open to the same objection as a splint, which, when in a small degree flexible, cannot be well adjusted to the part; and, when too weak, will produce no effect whatever.

The inventors of the above-mentioned machines, and many others, have boasted much of their success; but there are many practitioners disposed to think that they are not only useless, but dangerous, and have even supported this opinion by facts.

Hoin, surgeon of Dijon, mentions some cases and experiments on this subject.\* Dupouy conceives that situation alone will procure an union of the divided tendon without any other assistance; it was the opinion, he observes, of Pibrac, who informed him of many cases that had succeeded, by keeping the part in a state of rest, assisted by the most simple attentions, while the slipper of Petit, in his opinion, must necessarily produce the most serious symptoms, particularly in cases complicated with a wound of the integuments. Mr. Dupouy also remarks, that Petit's slipper is always pernicious, as it forces the tendons out of their sheaths, and makes them ride over each other, a circumstance

\* Vide Journal de Med. Jan. 1769. p. 56 and following.

which



which certainly might occur, when a bandage is not applied to the divided part.

Mr. Gauthier, with the same view, has published a number of cases.\* The first was of a man who had his tendon divided an inch from its attachment. The author placed the foot in a slight state of extension, maintained the dressings by a simple retentive bandage, and ordered a state of rest to be observed, *without enjoining any constrained position*. At the end of a month, the wound was cicatrized, and, at the expiration of six weeks, he was able to walk. The second case is that of a man, who broke the tendo Achillis in leaping, and who was perfectly cured, by a similar mode of treatment, at the end of 35 days. The same man is the subject of the third observation, for he had ruptured the tendon of the leg many years before, and his surgeon had employed Petit's machine. The treatment was tedious, the articulation of the foot remained swelled for a considerable time, and attended with difficulty in motion.

The slipper of Monro, after having been as generally employed in England as Petit's in France, has met with the same fate. Mr. Rodbard, of Ipswich, surgeon, has seen three patients, treated by extension, preserved by means of Monro's machine: he remarks, that these patients at first experienced difficulty and pain in walking, and that it was a long time before they could lower the heel sufficiently to mount a few low steps with sufficient firmness; and, from constant

\* Vide Journal de Med. vol. xlii. 1774.

observation, he remarks, that all those who have been treated by this method have ascended and descended with difficulty.

Mr. Rodbard unfortunately experienced this accident in his own person ; for, in attempting to leap over a small brook, he broke the tendo Achillis about three inches above the heel. The apprehension of pain and uneasiness, and the firm persuasion that the intervening space between the divided extremities of the tendon would be filled up with some species of matter, determined him to leave the cure to nature, instead of confining himself to his bed. He continued the exercise of his profession, walked much during the day, and even mounted on horseback, without taking any other precaution than not bending his foot. The tendon, however, united; and, five years afterwards, Mr. Rodbard, in a letter\* to Dr. Simmons, writes, " That he was capable of walking, running, ascending, " and descending, without pain; in a word, that the " functions of the affected limb were equally well per- " formed as the other, though it was much thinner than " in its natural state."—This surgeon mentions the case of another patient, who had the same accident, where the same treatment was employed, and attended with equal success.

Mr. Duchanoy, physician at Paris, relates the history of a successful case cured without bandage, by Mr. M. A. Petit; but the success to which he was a witness, Mr. Duchanoy observes, is no assurance against

\* Medical Journal, vol. viii. p. 304.



the danger of the plan : the patient may forget himself, and bend his foot ; this may happen in his sleep, and prevent cicatrization ; or it may be torn, a circumstance that has happened in many instances. Mr. Duchanoy seems to think that Mr. Petit's slipper is the only machine that is a security against this accident.

Mr. de Vilde is of the same opinion as Mr. Duchanoy, and, as a proof, relates the case of a man, who had a bandage, insufficient for the intention, applied for a rupture of the tendo Achillis, though it was disposed in such a manner so as to carry the foot a little backwards. This patient was obliged to wear crutches for a considerable time. Two years afterwards he was incapable of walking two leagues ; and, at the end of five years, he said, that, from the weakness of the limb, he could not support himself without the assistance of a stick.

Mr. Louis proves the necessity of a methodical treatment, by a case still more striking than those we have just maintained, which is extracted from a Thesis sustained at Dantzick, in 1720. A man, 56 years of age, ruptured the tendo Achillis, by leaping on the shore from out of a boat. The foot swelled immediately. On the 15th day, the inflammation was considerable, and accompanied with a smart degree of fever: the tumour burst in the vicinity of the tendon, and discharged a lymphatic gelatinous liquor; the ulcer spread fast, and exposed the two ends of the divided tendons: different abscesses were formed, the bones became carious, and gangrene supervened; and, at the expiration of 15 months, after a series of unsuccessful

successful treatment, the limb was amputated, and the patient died the 11th day after the operation.

It results from these facts, that the treatment of ruptures and divisions of the tendo Achillis had suddenly attained a considerable degree of perfection,\* when it degenerated by the invention of the slipper: the treatment of this accident has since proceeded nearly in a retrograde direction, and in time will be conducted in the same manner as when improvements were first suggested, viz. by the use of Petit's bandage, which is certainly to be preferred to every other method, particularly with the corrections we have mentioned, and which have been found of practical advantage.

*Case of a carious Affection of several Cartilages of the Ribs, cured by the Application of the Actual Caustery.*

[By Mr. THIÉRIOT.]

MR. Thiériot was consulted by a gentleman, 40 years of age, for a fistula between the left breast and the sternum, with which he had been afflicted for two years. An itch that had been re-

\* Discours sur le Traité des Maladies des Os.



pelled some years before seemed to be the remote cause of this complaint. The edges of this fistulous opening were callous, and discharged a red purulent sanies: there was great difficulty of respiration, attended with a dry violent cough, which came on at intervals, accompanied with a fixed pain at the posterior and left part of the breast, and considerable difficulty in the motions of the trunk.

Mr. Thiériot introduced a probe in the fistulous opening, and finding the cartilages of the sixth and seventh rib in a state of caries, passed it on to the source of the fistula, which was situated between these cartilages and the pleura. Though many surgeons had formed an unfavourable prognostic of this case, Mr. Thiériot attempted its cure. For the space of eight days, his belly was kept open by a bitter drink, with ʒj. of sal. Glaub. taken every morning. After this period, the patient was still more evacuated; and, on the 12th, Mr. Thiériot exposed, by a crucial incision, the cartilages and edge of the sternum, and, as there was a slight hemorrhage, dressed it with lint. The next day the actual cautery was applied to the exposed and carious parts, and was repeated four times in the course of the eight following days. At this period, the wound was covered with a considerable quantity of fetid sanies: the cough ceased, the pain in the back subsided, and respiration became freer. On the 31st day, Mr. Thiériot discovered a pouch at the bottom of the wound that retained the purulent matter, which he opened in the most dependent part. The cartilage of the seventh rib was found ossified and carious, and,

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four days afterwards, the actual cautery was employed, and repeated three times in the course of the six following days. The urine was turbid and in considerable quantity.

The 40th day, after the last application of the fire, several splinters detached themselves from the sixth rib, and fell off in a few days. Exfoliation from the fifth and seventh ribs, as well as from the sternum, was not long in taking place, and the cartilages soon appeared in their natural state, with this difference only, that they were less in size.

At the end of three months, as the suppuration still remained considerable, the wound was dressed three times a day with dossils of lint dipt in tinct. of aloes. From this time the suppuration sensibly diminished, and cicatrization was perfectly completed after four months treatment of the disease.

It is necessary to observe, that, from the time of the application of the actual cautery to the end of the cure, the patient constantly used a bitter drink, with the addition of one dram of the powder of bark.



*Case of a Pistol-shot Wound in the Abdomen.*

[By Mr. VERGEZ, formerly Surgeon to the Hôtel Dieu.]

**M**R. — received a shot from a pistol, in a duel, on the 13th June, 1790, at the distance of three paces from his adversary. The ball penetrated into the right hypochondrium, on a level and about four fingers distance from the umbilicus. The patient, who was about 24 years of age, full of strength and courage, rejected every assistance to enable him to regain his carriage, which waited for him about two hundred paces from the place of combat.

On his arrival home, a compress, dipt in warm wine, was applied to the part, and Mr. Default immediately sent for. Two hours elapsed before this surgeon could attend: by this time he was extremely fatigued, fainted every moment, and began to experience considerable pain at the part.

Mr. Default perceived a protuberance, formed by the ball, at the posterior and lower part of the aponeurosis of the latissimus dorsi, and at the inferior edge of the serratus posticus inferior: this was situated immediately under the integuments. An incision was made on the ball, and immediately extracted.

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It was dressed at first with dry lint; and, between the edges of the posterior wound, lint was interposed to prevent their reunion. With respect to the anterior wound, the same practice was not observed.

The patient was bled immediately after he was dressed, and ordered to drink barley-water sweetened with simple oxymel. It was, at this time, about three in the afternoon. About eight, the pulse became hard, the belly swelled and painful: the bleeding was repeated, and the belly covered with a poultice of crumb of bread and linseed-meal, moistened with aq. veg.

The patient was uneasy, and sometimes absent in his mind: a spoonful of an anodyne portion was ordered to be exhibited every hour. Notwithstanding, he passed a restless night: the pulse remained hard and small.

A third bleeding was ordered the next morning: the patient derived some ease from this evacuation; and the pulse became softer, but without any diminution of the tension or pain in the abdomen.

From the time of the accident he had no stool: two clysters were administered, which were not returned: two more were given the next day. After the fourth had been thrown up, he had an abundant evacuation, which procured considerable ease. The same means were continued to be employed to keep open the belly. The dressings were continued the same.

There was every reason to suppose that some portion of the intestines had been injured; but as no feces had passed through the posterior wound, during the treatment, but only a considerable quantity of serosity, it was judged that the intestines had not been divided,



but only bruised, by the ball. The anodyne portion was continued all the second day, but at longer intervals. The patient became easier, the belly less inflated, and, in fact, all the symptoms began to yield. Mr. Default directed the strictest regimen to be observed. The same drink was continued, and the same dressings observed.

On the 3d and 4th day, nothing occurred worthy of remark. The suppuration of the posterior wound began to be established; inflammation took place round the eschar, and the patient was as well as his situation could possibly admit. From the 5th to the 9th no alteration whatever took place; the belly diminished insensibly every day: the eschar was nearly detached throughout its whole circumference: the pulse became regular, but the patient was incapable of going to stool without the assistance of clysters.

On the 12th, the eschar separated, and exposed a wound of a red healthy appearance; the posterior wound also improved, though the suppuration was ferous.

Every time that the patient attempted to move the right inferior extremity, it was attended with such excruciating pain that he remained motionless, and was compelled to issue the most piercing cries: this continued for three entire days without interruption.

The extremity was ordered to be rubbed with the *Beaume Tranquille*. From the day of its application, the sensibility of the limb diminished in a small degree: its motions were more easily performed. After the second friction the pain was totally dissipated. There was,

was, however, one symptom occurred that demanded attention.

Until this period the nourishment of the patient had been extremely light, having taken nothing but broth; he now signified a desire to eat, and was permitted to take a small piece of chicken, which he soon afterwards vomited up, without complaining of any pain in the stomach at the time; nor was there any previous reason to suspect any disorder of the *primæ viæ*. He was again restricted to the use of broth, which, with a small quantity of wine, was his only nourishment; nor was it but by degrees that the stomach regained its power of retaining solid food.

On the 18th, the wound, formed by the entrance of the ball, was nearly cicatrized; but, at present, no change was observed at the counter-opening. The suppuration was plentiful and serous. The patient complained of pain, and a sense of weight in the part: the pulse was hard and concentrated. Two days previous to this, the poultice had been left off and the wound dressed dry.

On the evening of the 21st, a hemorrhage rather considerable took place; nearly two porringers of thick blood was discharged of a deep colour, which led to a presumption that it was venous. By employing a slight degree of compression it was stopt.

The sensibility in the thigh, mentioned before, again recurred. The quantity of nourishment was still more diminished; and, in consequence of a diarrhoea, which fatigued the patient extremely, some spoonfuls of rice-cream were prescribed.

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On the 22d, a linen tent was introduced into the posterior wound, and the patient recommended to lay on this part, with the view of facilitating the discharge of any blood or matter that might have collected in the abdominal cavity. There was no return of the hemorrhage: the suppuration increased; but, at the end of some days, improved in colour and thickness, and became perfectly inodorous.

On the 26th, the anterior wound was cicatrized. From the 27th to the 35th day, no circumstance occurred worthy of remark; the pain and tension had subsided, and the sensibility of the thigh was much diminished: the tent was withdrawn, and the wound dressed with dry lint. The suppuration retained the same quality, and diminished in quantity every day.

The patient was purged on the 40th and 43d days: the day after the second purge he got up; but, the first time he attempted to walk, he felt a violent pain in his groin, and was incapable even of extending either the leg or thigh, but, by means of gradual exercise and the use of the warm bath, the motion of the limb was soon restored. The patient soon regained his health and strength: the wound began to heal; the exuberant granulations were touched every day with the lapis infernalis. Cicatrization was completed, and the patient completely cured by the 66th day after the accident.

*Cases to prove that the Pulsation is an uncertain Sign of the Existence of Aneurism.*

[By Mr. ANTOINE PETIT, Surgeon-in-Chief elect of the Hôtel Dieu, at Lyons.]

# C A S E I.

ANN Vachot, of Saint Maury, in Bresse, was born with a tumour on her chin, of the size and shape of a small strawberry, without pain, heat, or discolouration of the skin. As this tumour produced no uneasiness or inconvenience whatever, it excited little attention, particularly as it did not seem to increase with the growth of the child. For the first fifteen years there was but little alteration; but, about the menstrual period, it increased suddenly to double the size, and became more elongated in its form: a quantity of pure red blood was observed to ooze from its extremity. This flux became, in some measure, periodical, and sometimes was sufficiently abundant to produce an alarming degree of weakness. Each period of its return was preceded by a violent pain in the head and a numbness.

Before and after the appearance of these symptoms, there was no alteration in the size of the tumour; the



the only difference to be remarked was a small enlargement of the cutaneous veins, with an increase of heat in the part, occasioning some degree of feeling.

The menses at length took place, but in small quantity and at irregular periods, without influencing the quantity of blood discharged from the tumour or the frequency of its return.

The breasts were not enlarged till a late period, nor did the approach of puberty seem to have its accustomed influence on those glands.

This young woman, who was strong and healthy, had attained her 24th year, when she was admitted into the Hôtel Dieu, at Lyons, on the 4th of March, 1791. At this period it was not a mere simple deformity, but a real disease, which obliged her to have recourse to the assistance of art.

In the course of three years it increased to three times its original size. Its shape now resembled a middling-sized pear, and adhered to the chin by its base. It remained nearly as indolent as before, but the sensation of heat was more lively and constant. An evident pulse was felt throughout its whole extent, particularly at its apex, which was shining and of a red colour, the only part that seemed in any degree altered. On examination, this pulsation seemed weaker, and to come from a greater depth as you approached the base of the tumour, where it entirely disappeared.

The subclavian, carotid, external maxillary, and temporal, arteries had suffered no alteration, either  
in

in their diameters or mode of pulsation. No fluctuation was felt in the tumour, nor did it diminish in size by pressure; some little inequalities were felt under the skin, which might have been taken for lymphatic glands.

Although there was some difficulty to believe it an aneurism, from its situation, where the vessels are small, yet, from the pulsation which accompanied the tumour, and the blood which it discharged at different periods, the suspicion was justified, that either blood was effused in the interior part, or that a considerable dilatation had taken place of the vessels that supplied it. The ligature was preferred to the instrument with the cutting edge for the extirpation of this tumour, though the lower jaw would have afforded a point of support sufficient for the suppression of any hemorrhage that might occur: the application of the ligature was no assurance against this accident, and, in case of hemorrhage, its suppression would have been more difficult; but, notwithstanding this, the ligature was applied 10 days after her admission into the hospital, though not very tightly drawn: the tumour became swelled, painful, and tense.

The cuticle rose up in vesicles, which discharged a considerable quantity of serosity. The pulsations, which at first seemed to disappear, were felt more forcibly than before, and became fatiguing to the patient. The serous discharge continued in the same quantity till the 4th day, when it begun to diminish. The night between the 4th and 5th day, after the application of the ligature, a considerable hemorrhage took place



place from a small fissure on the right and superior part of the tumour, whose pulsatory action was now sensibly less, without any diminution in the bulk of the tumour. The blood stopt of itself; but, from the weakness of the patient, it was necessary to support her with cordials.

In the course of the 6th day, she was tranquil: the tumour at this period afforded a more shining appearance, and those points on the surface where the vesicles had formed took on a white appearance, and began to suppurate; the discharge was at this time serous. On the 7th, an obscure pulsatory motion was felt. The patient felt herself better; her strength improved, the ligature that had been tightened at different times had divided the tumour at a considerable degree of depth. On the 11th day, as the ligature appeared to adhere only by a narrow pedicle, and the hemorrhage had not been renewed, it was separated by the bistoury. A few drops of blood only escaped. Simple dressings were applied, and no particular circumstance occurred during the formation of the cicatrix, which was perfected by the 19th of April, 26 days after the complete separation of the tumour, and 36 after the application of the ligature.

When the tumour was opened, it was found composed of a white cellular substance, hard, and similar in texture to the skin of a hog: a number of blood-vessels were found diffused through its surface; and, under the skin that covered the tumour, they were more numerous than natural.

## C A S E II.

**M.** Leclerc, 41 years of age, and of a weak constitution, had an operation performed in the Hôtel Dieu, at Paris, on the 26th of February, 1789, for a cancer in the left breast, large in size, and ulcerated throughout its whole extent. The wound healed completely, and the patient left the hospital on the 9th of the following May, with a sense of languor, to which she had been accustomed before the operation. At the expiration of six months, she experienced a dull sense of pain in the axilla of the same side. A tumour now appeared above, and near the external angle of the cicatrix. The tumour was hard, and without discolouration. It increased in growth very slowly, and, on her admission into the hospital, in January, 1791, neither undulation or pulsation were felt in its substance.

This patient, whose complaint was viewed as a renewal of the cancerous affection, was deemed incurable, and sent to the hospital of St. Louis. The nature of the tumour soon changed, the pains became acute, it augmented in size, and soon acquired the bigness of a fist: it became gradually softer, and a fluctuation was now perfectly evident. The patient was in this situation when examined by Mr. Desault, who, feeling no pulsation, but only a sense of undulation, made no hesitation in opening it. On the first



first stroke of the bistoury, instead of pus, a quantity of coagula and fluid blood was discharged, which continued to flow till a compression was made on the axillary artery. Mr. Default enlarged the external opening in the breast and axilla, and, after clearing away the coagula, and relaxing, in a slight degree, the compression on the axillary artery, was satisfied that the blood was discharged from one of the thoracic arteries. A ligature was passed above and another below the division, which was sufficient to put a stop to the hemorrhage. The wound was dressed with dossils of lint, sprinkled with colophony: coarse lint applied over the whole, and retained in its situation by means of a moderate tight bandage.

The patient supported the operation with courage, and was sufficiently well to be carried to the Hôtel Dieu, where she could be more immediately under the inspection of Mr. Default. Two days after the operation, the superficial lint was removed, and the rest moistened with an emollient decoction. On the 7th, the whole lint was removed, which came away as easily as suppuration was established: the bottom was cleaned by the use of an emollient injection. The patient was directed to take a decoction of rice, sweetened with sirup of quinces, to check a considerable diarrhœa, which fatigued her extremely, and with which she had ever been affected, previous to the operation. The wound went on well: she was imprudent enough to use a good deal of exercise, and move the affected arm. Sometime afterwards there was an oozing of blood, which was checked by dossils of lint, sprinkled with



with colophony. The appearance of the wound now seemed to improve; but, soon afterwards, there was a considerable quantity of fungi made their appearance on the anterior, superior, and posterior, edges, which afforded a continual discharge of blood. Compression, by means of bandage, was employed, and the wound still dressed with dry lint and colophony.

Each day there was a return of small hemorrhages, which were proportionably difficult to stop, as the blood was in a dissolved state and came from the whole surface of the wound: it was checked, however, by proper attention.

The patient grew more and more enfeebled, and was more inconvenienced than ever by the diarrhœa, which had never ceased from the time of her admission into the hospital.

She sunk under her complaint 52 days after the operation; and, from the quick putrefaction that took place, the body was not examined.

Mr. Petit observes, that the publication of these two cases serve to prove, that pulsation, one of the principal pathognomonic symptoms of aneurism, is equivocal and uncertain.

In the first case, the tumour was sarcomatous, and afforded a pulsatory expansive motion, perfectly similar to that kind of pulsation that is said to be a characteristic proof of the existence of aneurism.

In the second case, the tumour was really aneurismal, and afforded no pulsation; and the commemorative symptoms, so far from inducing a suspicion that the



tumour was sanguineous, only led to the idea of its being of a cancerous description.

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*Case of a Gun-shot Wound through the Thigh.*

[By Mr. LABISTIDE, Surgeon to the Hôtel Dieu.]

JOSEPH Thévenin, 22 years of age, on the 14th of July, 1789, whilst assisting at the attack of the Bastile, experienced a sense of considerable numbness in the right foot as he was crossing the draw-bridge. He conceived that he was wounded; but, not perceiving the wound, he shook his leg with the view of dissipating what he supposed to be the cramp: he then took to his arms, passed the bridge, and joined the rest of the assailants. About eight minutes afterwards, he felt his strength diminish, and suddenly his body was covered with a cold sweat: one of the French guards, who fought by his side, to whom he had communicated his situation, remarked that his breeches were stained with blood. He retired to a wall, sat down, and wrapt a handkerchief round his thigh.

Though he had not lost much blood and was full of courage, he was incapable of rising. They took him to a neighbouring church, dressed his wounds,  
and

and thence conveyed him on a litter to the Hôtel Dieu.

A ball had passed through the thigh, in an oblique direction, from above downwards: its entrance was observed at the middle part of the thigh internally, and a little posteriorly; and the wound, made by its external passage, was situated on the inferior part and the outside of the thigh.

The wounds were round, and did not perfectly correspond to the diameter of the ball. At this time there was tension and swelling of the surrounding parts.

Mr. Default enlarged the wounds, from above downwards, by an incision of about half an inch in length; then passed a seton in the course of the ball; being first satisfied of its direction, and convinced that it was unconnected with the large vessels of the thigh, which were situated a few lines more forward: the orifices of the wounds were covered with soft lint, and the thigh covered with an emollient cataplasm, moistened with aq. veg. and covered with compresses moistened in the same fluid. As there were no symptoms of plethora, venæsection was not ordered: he was only kept on strict diet, with a relaxing drink, sweetened with sirup of lemons.

The edges of the wound, the next day, were a little swelled, and the tension greater than in the preceding evening: there was appearance of ecchymosis in different parts of the thigh. These symptoms increased, and, on the 3d day, there was considerable hardness of the parts, contiguous to the wound, with



a swelling of the whole thigh. — There was little fever.

On the 4th, the skin became hot and dry, the pulse frequent, hard, and raised; the mouth clammy and furred; 3 j. of cream of tartar was ordered to each pint of drink, which produced two copious stools towards the evening.

The following night he was quiet; and, the next day, there was little remaining fever or heat on the skin; the swelling of the thigh had diminished at the same time, and suppuration began to be established. The use of the cream of tartar was persisted in for a few days, but in smaller doses.

On the 6th, the wounds furnished an abundant suppuration, of good quality and without smell: the quantity now daily diminished in proportion as it improved in consistence: the tension and swelling kept continually decreasing till the 15th day, when they had totally subsided. Five days afterwards the seton was suppressed.

On the 30th, the suppuration had ceased: the wounds, at this time, were rather pale in appearance, and required, as a stimulus, to be slightly touched with the lapis infernalis.

In two days the poultice was left off, but the use of the compresses, dipt in the aq. veg. min. were persisted in till cicatrization was completed. The limb now admitted of a slight degree of motion, which, till this period, could not be effected.

The patient got up on the 36th day for the first time, and was able to walk with the assistance of crutches,

crutches, which he left off in three days, and was capable of supporting himself on his leg. He continued to use a good deal of exercise for some time: and, when he left the hospital on the 14th of September, the use and motions of the limb were perfectly recovered.

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*Case of a Cancer of the Penis cured by Amputation.*

[By Mr. CORIGNI, Surgeon, at Torigni.]

MR. G——, of Torigni, in Lower Normandy, 75 years of age, at the beginning of the year 1787, experienced a considerable itching at the end of his penis, to which succeeded an excoriation, attended with extreme pain. Mr. G—— continued to mount on horseback as usual, to fulfil the duties of his profession; but, from the shaking necessarily consequent to this exercise, great irritation was produced: considerable swelling supervened and affected the whole penis, which compelled him to remain at home in a state of rest. He fomented the part immediately with brandy and water, which had no influence in checking the progress of the disease; on the contrary, the glans,



after swelling extremely, ulcerated, and discharged a quantity of ichorous green and extremely fetid matter. The veins of this part soon became varicous, the corpora cavernosa affected, the pain became in the highest degree excruciating, and allowed no rest to the patient.

This man passed four or five months in this state, without consulting any professional men on the subject; nor was it till the disease had attained its utmost virulence, that he surmounted the false shame, which had hitherto prevented him from disclosing his true situation. He called in, successively, a variety of different surgeons, who recommended different means of cure; but their effects did not answer the flattering hopes he had conceived.

Mr. Corigni was called in on the 12th of August. In consultation, on the appearance of the disease, and after the recital of the symptoms above-related, there was no difficulty in pronouncing on the character of the disease.

Mr. Corigni proposed amputation of the penis, as the only means of cure; viewing every other method as useless, and attended with danger. Fomentations were ordered, composed of marshmallows and elder-flower water, and a cooling regimen enjoined. Three days afterwards, the tongue was a little furred, which symptom was removed by a slight purge.

The 18th of August, being fixed for the operation, three surgeons, and a physician in the confidence of the family, were invited to be present. On their meeting in the patient's chamber, Mr. Corigni was surprised

surprised to hear the physician and two of the surgeons propose to make a simple incision on the extremity of the penis, which was hard, swelled, and painful : with the view of unloading the parts, and obtain, perhaps, by this means, the cure of the patient. This proposition, less terrifying than the other to the patient and his relations, was adopted, in spite of all the representations made by his other colleague, to prove the necessity of amputation. They could not conceive that this incision, instead of alleviating the disease, which was certainly a cancer, could encrease its violence, and might render useless, in the sequel, the only possible operation that could be proposed to prolong the life of this unfortunate patient.

It was necessary to yield to the opinion of the majority. Mr. Corigni desired the three practitioners to trace the line he should follow, and the parts they wished to be incised : this they did, and Mr. Corigni incised the parts, agreeably to their directions. The wound was dressed with fine lint, and covered with compresses, which were removed each time he had occasion to urinate : the ordinary fomentations were continued. The next day the edges were hard, extremely painful, and turned back : the penis was of a considerable size ; its body became hard and schirrus, and to such a degree, that, in six days, the disease had affected two inches more of the penis, which might have been preserved by performing the operation sooner.

The rapid progress of the disease, announcing the urgency of the operation in the first instance proposed, induced Mr. Corigni to inform the family



again, that, if it were deferred even for a few days, death would be the inevitable consequence. The two surgeons and the physician were again consulted; the two former attended, who agreed in the necessity of not deferring the operation: it was performed on the 25th of August, in the following manner:—The patient was brought and supported on the edge of his bed, his thighs separated and secured by two assistants, and his body supported by a strong man, who placed himself behind. Mr. Corigni placed himself opposite the patient, and took hold of the body of the penis with the left hand, and, with the bistoury in his right, carried under the penis with the edge upwards, formed a semilunar incision from the right to the left, (with respect to the patient,) extending above three lines above the diseased part, near to the scrotum; the urethra and nearly half of the corpora cavernosa were comprehended in this section; and, by reversing the edge of the bistoury, and directing it from above downwards, the total section of the penis was completed. The different arteries were secured by ligatures, and a catheter of the elastic gum introduced into the bladder, and properly secured, to facilitate the passage of the urine: the wound was dressed with fine lint, powdered with colophony, and covered with proper compresses. The dressings were secured by a T-bandage and a scapulary. A cooling diet was enjoined; he was easy the first day and night subsequent to the operation; the following days and nights he continued much the same. On the 4th, the lint was perfectly detached by the suppurative process, and exposed a wound of a red healthy appearance.



appearance. The dressings were continued with dry lint, the edges were only dressed with slips of fine linen, dipt in cerate, to prevent the adhesion of the lint. The first eight days passed without any accident: a small quantity of solid food, such as poultry, fresh eggs, &c. was permitted.

The second week passed the same as the first. Mr. Corigni wished the patient to have some kind of an issue, but could not obtain his consent. This, however, did not hinder the cicatrization of the wound, which certainly would have been completed in five weeks: but, a few days before the expiration of this time, he had the imprudence to withdraw the catheter, without Mr. Corigni's consent, who had been absent for two days. The next day the external opening of the urethra was closed to such a degree, that the urine could only pass drop by drop, and with considerable pain. He passed 48 hours in this state: Mr. Corigni, on his arrival, made many fruitless attempts to introduce the catheter, but was prevented by the sensibility of the parts, and the tightness of the passage. Under these circumstances, Mr. Corigni judged proper to apply a small piece of caustic stone, and afterwards cut off the dead parts as far as the urethra. The passage being now free, a great quantity of urine was evacuated, which gave instant ease to the patient. The catheter was again introduced into the bladder, and taken out every four days to be cleaned, to prevent incrustations: the patient wore it till cicatrization was completed, which did not take place till the 68th day after the operation, when this patient recovered his health



health and strength, and followed his usual course of life, which had been interrupted for more than eight months. A kind of silver funnel was invented, and adapted to the opening in the urethra, when he wished to evacuate his bladder: this instrument, simple in its construction, served to direct the urine, and prevent his clothes being wet. Four years after the operation, he enjoyed, in every particular, such a perfect state of health, that no apprehension was entertained of a relapse.

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*Continuation of the Abstract of Mr. DESAULT'S Lectures.*

*Diseases of the Urinary Organs continued.*

*Retention of Urine produced by an Alteration in the Natural Situation of the Viscera of the Pelvis.*

THE displacement of the viscera, which frequently gives rise to retention of urine, are retroversion of the uterus, a prolapsus of this viscus, of the vagina, or the rectum.—If we attend to the intimate connection existing between the bladder, the uterus, and vagina, we shall admit that these parts cannot be displaced

placed without dragging the bladder with it, and that in this state of derangement, with whatever force it may act, it can never completely contract on itself sufficient to effect the total expulsion of the urine: to this deficient action of the bladder, is necessarily added an increased resistance on the part of the urethra. The beginning of this canal, drawn away with the bladder, changes its natural direction, which cannot take place without the compression of its sides against each other; consequently, producing more or less obstruction to the passage of the urine. It is thus that the os tincæ, in the retroversion of the uterus, when carried above the pubis, draws with it the posterior part of the bladder, which, from its continuity, distends the beginning of the urethra, draws it upwards, increases the curvature of this canal under the symphysis pubis, against which it is forcibly applied. In the prolapsus and inversion of the uterus, vagina, or rectum, the posterior part of the bladder, instead of being carried upward and forward, is drawn downwards and backwards, and the natural curvature of the urethra is totally changed. So far from a considerable concavity existing under the pubis, as in the case of retroversion, the bladder presents at this part a convex appearance; a disposition of parts, which should always be held in view in passing the catheter, as it throws a light on the curvature and direction, we should give to the instrument to facilitate its introduction.

It is always easy to discern and distinguish symptoms of the same species, as when retention of urine is occasioned by displacement of the viscera, the reunion  
of



of signs, peculiar to each displacement, and, with the common symptoms of retention, assure the diagnostic.

If the retroversion of the uterus is the cause of the accident, by the introduction of the finger in the vagina, we may feel, at the anterior of its cavity, a tumour, formed by the collection of the urine in the bladder. The os tincæ is no longer in its natural situation, it is turned forward and above the tumour, whilst the bottom of the uterus is directed backwards against the rectum and anterior part of the sacrum. We cannot always reach as high as the os tincæ when the retention of urine is complete and the bladder considerably distended: under these circumstances we should suspend our judgement on the particular cause of the complaint, until we have passed the catheter to evacuate the urine; and, by this means, be enabled to examine the state of the uterus; but, if instead of finding the os tincæ high and forward, we should discover it nearly or out of the orifice of the vagina, no doubt can be entertained, that the retention is produced by a prolapsus of the uterus: on the contrary, we shall be convinced that it depends on an inversion of that viscus, when it comes on a short time after child-bed, or after the passage of a uterine polypus, &c. we feel, in the vagina, a semicircular body, slightly painful, unequal, firm, surrounded by a kind of collar, which seems more or less to tighten it, and round which the finger may be passed; or when we perceive, out of the cavity of the vagina, in cases of complete inversion, a large tumour, rounded at its inferior part, without any transverse fissure, red and unequal, with small deep apertures,

apertures, through which the blood flows at the menstrual period.

We also know that retention is caused by inversion of the vagina, by the appearance of the tumour; sometimes elongated in the form of a pudding, and sometimes in the shape of a collar, irregular and folded in its appearance, red, puckered, and pierced, with a circular opening, through which the neck of the uterus might be felt, generally situated lower than natural: it is known when the urine is retained by the inversion of the rectum, when the difficulty and impossibility of voiding the urine does not come on till a few hours after the inversion takes place, and when no other obstruction of the urinary passages has preceded.

These species of retention rarely terminate fatally, they generally subside by the reduction of the displaced viscus, and the replacement of the bladder, and the commencement of the urethra, unless the coats of the bladder have been much enfeebled by the too-violent distension of its fibres: in this case we must have recourse to the remedies we have before pointed out.

The reduction of the viscera is the first indication we have to fulfil. The reduction of the retroverted uterus is often attended with great difficulty; we succeed, however, by depressing the *os tinæ*, by pressing above the pubis, with two fingers introduced into the vagina, whilst a pressure is made on the fundus uteri with the finger of the other hand introduced up the rectum. It is equally difficult to retain the part in its situation



situation when reduced. Sometimes an ordinary pessary will effect it: a machine is, however, to be preferred that is composed of an ivory handle, four or five inches in length, slightly bent, terminating at the point in the shape of an olive at one of its extremities, and the other secured under the thigh by a T-ban-  
 dage. This instrument, introduced up the rectum, pushes forwards the fundus of the uterus, and prevents its inversion backwards.

With respect to the prolapsus of the uterus, there is generally no great difficulty in the reduction; but it is not the same with the inversion of this viscus, particularly when complete; and, when it has existed for a considerable time, the size of the uterus, consequent to the swelling, becomes considerable, and that, even to this day, it has been regarded as an insurmountable obstacle to its reduction.

Extirpation, by amputation or ligature, has been proposed, and has sometimes been executed with success. But we, however, are satisfied by experience, that a methodical compression is adequate to the dispersion of these species of swellings; and though we have not a case in point to adduce, yet, reasoning from analogy, we may suppose that this viscus would regain its natural size by these means, and that then the reduction might be effected; or, at least, that it might be pushed up into the vagina, and prevent those consequences that would be inevitable from the uterus being left out of the orifice of the vagina.

In cases of procidentia ani and of long standing, compression has been used with success, when all other  
 means

means have failed. A linen tent, introduced up the intestine, dissipates the complaint, and prevents a relapse.

If the reduction of the displaced viscera is not easily affected, or the suppression of urine removed, and the symptoms happen to be urgent and serious, recourse should be had to the catheter. Frequently the reduction is easier after the evacuation of the urine: the cavity of the pelvis then being freer affords a more ready entrance to the parts that had been displaced: but, from the alteration in the direction of the urethra, the introduction of the catheter is sometimes attended with difficulty, and it is only by accommodating the instrument to the deviations from the natural curvature of the canal, that it can be passed into the bladder.

For example, in the retroversion of the uterus, we succeed better with a curved catheter, than those generally employed, which are strait. A curved catheter should be employed in cases of prolapsus and inversion of the uterus, &c. but with this difference, that in a case of retroversion, we should turn the concave part of the instrument towards the pubis, and, in a case of inversion, we should direct it towards the anus: sometimes we can succeed only by forming a sort of boring motion in the urethra; and often, when solid catheters will not answer, we succeed by flexible ones, as they adapt themselves better to the curvatures of the canal; but if the viscera cannot be reduced, nor the catheter passed, which ought to be a very rare occurrence, and we fear that the bladder will burst, we must have recourse to puncture as a last resource, an  
operation



operation which we shall describe with the greatest attention.

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*Retention of Urine dependent on Compression of the Neck of the Bladder or on the Urethra.*

THE causes tending to produce a compression on the neck of the bladder, or on the urethra, sufficiently strong to obstruct the passages of the urine, are extremely numerous: we shall divide them into those that affect the uterus and vagina in women, the rectum, the perinæum, the scrotum, and the penis in men.

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*Retention caused by the Pressure of the Uterus and Vagina on the Neck of the Bladder and on the Urethra.*

THERE are two periods in pregnancy, when women are particularly subject to retention of urine, which are the fourth month and the time of delivery:

livery. To explain properly how this circumstance occurs, we should recollect, that in the first months after conception, the uterus remains concealed in the pelvis, nor does it rise above this cavity till the fifth month, and sometimes later; and that at this period, having progressively increased in size and weight, it descends lower down in the vagina, and compresses like a wedge, posteriorly, the rectum, and forwards the neck of the bladder and the urethra, which it presses against the symphysis pubis, and sometimes to such a degree as to close the aperture of this canal and prevent the passage of the urine. After this explication of the alteration in size and situation of the uterus, the mechanism of this species of retention appears so simple, and in fact so natural, that we might be induced to expect it would occur frequently in the fourth and fifth months of pregnancy, but the truth of this fact has not been verified in a very considerable number of women who have been delivered in the Hôtel Dieu, not one of whom have mentioned being troubled with this inconvenience.

Mr. Default, though he does not assert that this circumstance can never take place, is of opinion, that the progressive alteration in size and situation of the uterus, will tend to protect the neck of the bladder and the urethra from the effects of compression. In fact we know, that the alteration in the uterus begins to take place, first in the fundus, then extends to its body, and that the neck preserves its size and length even to the sixth month; a period when the uterus, too voluminous to be contained in the little pelvis,



rises above the superior margin. As long as this viscus is contained in the cavity of the pelvis, being larger towards its fundus than towards the neck, it ought rather to compress the ureters and the body of the bladder than the neck of this viscus and the urethra, as its largest part is situated above, unless we suppose a complete descent of the uterus.

Although all authors, who have written on the subject of midwifery, have mentioned retention of urine as produced by the fastening in of the head of the child as a common occurrence, Mr. Default observes, that not a single instance has occurred in support of this fact for the space of eight to ten years in the Hôtel Dieu, where, on an average, from fifteen to sixteen hundred have been delivered every year. Mr. Default does not infer from this remark, that retention, produced from this cause, has not in many instances occurred, but at the same time is of opinion, that it does not happen so frequently as we have been taught to believe. Women, it is true, when the head remains long in the passage, have frequent desires to make water, which are apt to impose on inattentive practitioners who are disposed to attribute this circumstance to this viscus being distended with urine, without reflecting that irritability can produce equally the same effect. When we reflect on the disposition of the head of the child wedged in the small pelvis, and consider at the same time its relative connection with the bladder, it appears that the body of this viscus and the ureters are more exposed to compression than the urethra and the neck of the bladder ; and it is

is sufficiently probable, that the urine, so far from collecting in this pouch, cannot descend into its cavity, and that they are retained in the ureters : this conjecture is more probable, as retention of urine is more frequently the concomitant symptom of the fastening in of the head of the child, than subsequent to this circumstance, and this symptom then happens not from the resistance of the canal but from weakness of the bladder, contused by the head of the infant ; a contusion which terminates sometimes by gangrenous eschars at the bottom of this viscus and at the corresponding portion of the vagina, and often occasions urinary fistulæ, always difficult and sometimes impossible to cure.

If a retention of urine should occur at either of these periods of pregnancy, we may inform ourselves of the state and situation of the uterus and the head of the child, by means of the touch, and we may learn from the patient if she has had any previous obstruction to her urine, or if there is any other existing cause that may prevent its evacuation. Frequent desires to make water, and defect of secretion of the urine, are in this case only equivocal signs of retention ; for, as we have before observed, irritation of the bladder may produce the one, and the other may depend on compression of the ureters ; if the retention was occasioned by the supposed pressure exercised by the uterus on the neck of the bladder, and on the urethra, towards the fourth month of pregnancy we could have no ground to suppose that this inconvenience would subside without a relapse, until the uterus, in conse-



quence of its enlargement, had increased to such a size, as to rise above the cavity of the pelvis, and consequently would be incapable of descending again. During this enlargement of the uterus, the evacuation of the urine is attempted to be procured by separating the collum uteri from the bladder and urethra, by introducing the finger upwards, behind, and a little on the side of the symphysis pubis; and if these means do not succeed, recourse is had to the catheter; if the retention should arise from the head of the child being wedged in, the delivery has been recommended to be finished, either by altering the position of the head, or by drawing it away with the forceps, or even with the crotchet, if we are first assured of the death of the child: but before this operation is undertaken, the urine should be evacuated with the catheter. Levret proposed catheters of a particular construction in these cases: he employed one in imitation of Mr. J. L. Petit's; which, instead of being pierced with two eyes at the sides of the beak, had a circular opening at its extremity shut by a button supported by a stilet. This alteration was to avoid the inconveniences of lacerating the urethra, an accident sometimes occasioned by the eyes of the catheters generally employed; (*see in volume the first an easy method of obviating this difficulty.*) In cases of prolapsus, or inversion of the uterus, the same author recommends flat catheters instead of the round ones in general use; and indeed it appears, on the first view, more probable that these catheters can be used with more advantage when the urethra itself is flattened, but it is in

in fact only a specious superiority, which is contradicted by experience. We learn, from daily practice, that in these species of obstruction, we succeed better by turning the catheter when passing it than by pushing it directly forward. This motion cannot possibly be performed with a flat catheter : if they say that an advantage will result, from the diameter of the bore being less than the cylindrical catheters, and that consequently they will pass easier, they should recollect that a cylindrical one may be chose of a smaller diameter ; but even admitting that these sounds possess the advantages supposed, in our opinion they are useless ; for by comparing the width of the arch of the pubis, with the size of the gravid uterus, or the head of a full sized foetus, it appears next to an impossibility that the canal of the urethra should be compressed to such a degree as not to admit the passage of an ordinary catheter. It is not only in a state of pregnancy, and at the time of delivery, that retention of the urine is produced by the distension of the uterus and vagina ; the same symptom will always take place from any extraneous body contained in these cavities, of sufficient magnitude to distend them. The same effect may arise from a considerable swelling of these parts, sufficient to prevent them being contained in the cavity of the pelvis ; and thus compressing the neck of the bladder, and checking the progress of the urine. Retention may also depend on tumefaction of the uterus from a mole, a polypus, or an effusion of blood or water in its cavity. It may also be produced from an inflammatory swelling, a



schirrus or cancerous affection of this viscus, or from distension of the vagina by the menstrual blood, by a pessary, linen tents, or any other extraneous body introduced into its cavity. We shall not here enter into a detail of the particular symptoms of these various species of retention, or of their causes: they are only symptomatic; and the prognostic is proportionably dangerous to the disease which originally produced them. The retention, independently considered as a symptom, is unattended with danger; for the water can be evacuated by an operation generally easy to perform; and even the introduction of the catheter is not always necessary, for sometimes the contractile force of the bladder is not lost, and the original cause of retention will admit of being removed: for example, when the urine is obstructed by the compression of a pessary, a tent, a collection of blood in the vagina, &c. the extraction or evacuation of these extraneous bodies removes the pressure on the urethra, when the contraction is sufficient for the evacuation of the urine; but there are also cases where art cannot remove the cause of the retention, and relief can only be hoped from the efforts of nature, as in the expulsion of a mole, a polypus, &c. which is entirely an exertion of nature; and as her operations are often gradual and slow, we are obliged to use the catheter, till her endeavours are perfected. Sometimes the united efforts of art and nature are inadequate to the removal of the cause, as when the uterus or vagina are affected with carcinoma or schirrus: in these deplorable cases, our only resource is the catheter,

theter, the introduction of which becomes often useless, from the progress of the complaint; for incontinence often succeeds to retention, which is occasioned by ulceration of the vagina and inferior part of the bladder, producing a communication, by which means the urine continually passes through the cavity of the vagina: the mixture of this fluid with the cancerous matter, renders the discharge so extremely fetid and acrid, that no situation can be conceived more truly distressing than those unfortunate women afflicted with this cruel disease.

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*Retention of Urine occasioned by the Pressure of the Rectum on the Neck of the Bladder and the Beginning of the Urethra.*

THIS sort of retention is extremely analogous with the one we have just described: the only distinction is, that in the one the compression is exercised by the uterus or vagina, and in the other by the rectum. The causes are also nearly the same; for the rectum, like the uterus and vagina, may be distended with wind, fungi, blood, by tents made of linen, or lint. This intestine is also subject to enlargement from inflammation, schirrus or carcinoma, or from the formation of matter between its coats,



and in the vicinity of the anus. This gut is likewise subject to distension from hemorrhoidal tumors, indurated fœces, &c. and in these different states will press on the neck of the bladder and the canal of the urethra. We form our diagnostic of this retention from the state of the rectum, from the symptoms which usually accompany the diseased alterations just treated of, and from the freedom of the urethra and the absence of the other causes of retention. The prognostic of this species of which we are immediately treating is essentially connected with that disease of the rectum that originally produced the complaint; and the radical cure of the one, is necessary for the successful termination of the other. The indication is to destroy, if possible, the cause of the retention, if it can be conveniently effected; but if this proceeding is attended with danger, and the disease will admit of no alleviation from art, we must content ourselves with the introduction of the catheter: for example, if the retention should be occasioned by a collection of blood, or fœces, in the rectum, we need not hesitate to extract them; but if the urine should be retained by tents, introduced up the intestine, with the view of stopping a hemorrhage, they could not, with safety to the patient, be extracted. In cases of schirrus or carcinomatous affections of this gut, the use of the catheter is preferable and even necessary, and its introduction is rarely attended with difficulty.

In these cases it is preferable to pass this instrument every time the patient has occasion to urine, than to leave

leave it in the bladder ; for in this case the additional pressure exercised on the urethra, is apt to excite inflammation and sloughing. The different diseased affections of the rectum are to be treated by remedies appropriate to the particular nature of the complaint.

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*Retention dependant on Compression of the Urethra, by Tumors in Perinæo, in the Scrotum, or on the Penis.*

**A** TUMOR, however small, cannot exist in either of the above situations, without exercising a greater or a less degree of pressure on the canal of the urethra. Whether it is a simple swelling, or produced by the extravasation of some fluid, or by the presence of some extraneous body, the effect is the same : for retention has been known to arise from swelling, effusion, stones in perinæo, &c : it has been also produced by sarcocele, hydrocele, by large hernia, and by an aneurism in the cavernous bodies of the penis, by a ligature on the penis, &c. When we have removed the cause of the retention, we should evacuate the urine by the catheter. Those made of elastic gum, are to be preferred to those made of silver, as they pass with more ease, accommodating themselves more readily to the curvature of the urethra



thra. Those of a middling size should be chosen, armed with their stilet, and introduced till they are stopped in the canal; the stilet should then be retracted about an inch, to leave at liberty the beak of the catheter, that it may better adapt itself to the curvature of the urethra: the catheter may be then passed on, taking care that the stilet is not pushed quite to its extremity. By this cautious mode of procedure, we are always enabled to introduce it into the bladder.

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## PATHOLOGICAL ANATOMY.

*Case of a considerable Contraction of the Aorta Ascendens, dissected at the Hôtel Dieu at Paris.*

[By Mr. PARIS.]

**M**R. Paris observes, that among a considerable number of subjects that he injected for the purpose of dissection in the course of the winter of the year 1789, some appearances offered themselves, in the body of a very thin woman, about fifty years of age, worthy of record, from their singularity, and the advantages that the healing art may derive from  
their

their disclosure. This subject was injected with a composition made of equal parts of resin and suet, coloured with lamp black. The pipe was fixed at the origin of the aorta; and the injection passed with such ease, that much more might have been thrown in than is usually employed for adults. As the subject was very thin, the trunks and branches of the thoracic arteries were seen, on the sides of the chest, without any previous dissection: these vessels were larger and more tortuous than natural; a disposition which induced Mr. Paris to prosecute the dissection with particular attention. He found that part of the aorta which follows its curvature, and which was situated between the arterial ligament (the remains of the canalis arteriosus) and the first inferior intercostal, in such a state of contraction as to be reduced to the diameter of a writing pen; and deducting the thickness of its coats, the actual cavity of the vessel was extremely small; that part of the artery, which was situated above the contracted part, was scarcely dilated; and that portion, situated below, preserved its ordinary diameter. The most careful and attentive dissection did not tend in the least to explain the cause of this diseased alteration in the vessel. There was nothing particular to be remarked in the carotids or their branches; but the arteria innominata, as well as the subclavian, were augmented one third in diameter, the left subclavian was increased in size more than one half, and the branches of the two subclavians had increased in proportion, and formed a zig-zag kind of course; the internal mammary arteries were one sixth  
of



of an inch in diameter, and the superior diaphragmatic one eighth of an inch; this last was tortuous in its direction; the transverse cervical arteries were increased to double their size, and all their posterior branches passed for a considerable way, in a serpentine direction, before they anastomosed with the posterior branches of the intercostals: the intercostals which arise from the subclavians were one sixth of an inch in diameter. The thoracics, the scapulary, and the other principal branches which are given off by the axillary to be distributed either totally or partially on the breast, were increased to double their natural magnitude. The first and second intercostals, which arise from the thoracic portion of the aorta above the contracted portion, were three lines in diameter; the rest, as they descended, diminished insensibly in size till the last, which were nearly of their natural diameter; the anterior branches of these arteries were a little enlarged; but the posterior ones were so much augmented in size, and were distributed in such a close zig-zag manner, that they resembled beads placed on one another; their anastomoses, with the transverse cervicals, were considerable and very apparent. The branches given off by the aorta descendens afforded nothing remarkable except the inferior diaphragmatic, which was larger than natural; and its anastomoses with the superior diaphragmatic more considerable. The epigastric was also circumstanced in the same manner, and was of the same size as the internal mammary, with which it freely anastomosed. After the particular description of the vessels

fels we have just described, it is evident that, the circulation in this woman must have been carried on in an extraordinary manner : instead of following the direction of the trunk of the aorta, the blood circulated through the branches which originated above the contracted portion, that is to say, from those furnished by the subclavian and axillary, into the branches originating below the contraction, such as the intercostals, the inferior diaphragmatics, and the epigastrics, by means of numerous anastomoses existing between these arteries, on the chest, and on the anterior parts of the abdomen.—Mr. Default has preserved this anatomical preparation in his museum.

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*Case of Commotion of the Brain, cured by the Application of a Blister to the Head.*

[By M. NAUDOT, D.M. Physician to the Hôtel Dieu of Provins.

**M**ARECHAL, eight months and a fortnight advanced in her pregnancy, was thrown down by a spirited horse, and received a violent contusion from a kick on the right orbital ridge. This happened on July 2, 1789. There was considerable  
eccy-



ecchymosis, particularly on the parietal bone, which appeared to have received the principal shock, from the excoriation and considerable swelling that supervened on the part. On the arrival of Dr. Naudot, 16 hours after the accident, she was senseless and comatous, which ceased only when compression was made on the excoriated part. At this time she muttered a few incoherent words; the eyes were fixed; the pupils dilated, and perfectly insensible to the light; the pulse was concentrated, but equal. The patient rejected by vomiting immediately after the accident every species of aliment that she had swallowed. This woman had been bled twice at the arm, and several clysters thrown up, which had produced the desired effect. From the urgency of the symptoms, Dr. Naudot was induced to order two copious bleedings from the jugular vein, from which the patient derived no advantage whatever. The next day a strong blister was ordered to be applied over the whole scalp, which was previously shaved. An hour afterwards, she was attacked with labour, pains, and delivered of a fine boy. The state of the mother remained the same till the blister began to act: its good effects were so immediate, that the comatous symptoms were soon diminished. The first 24 hours, the surgeon who attended was careful to keep up an abundant suppuration; and the patient recovered by degrees, and in a little time the use of her faculties. At the end of 8 days, she employed herself in her ordinary occupations, and even went out of the house. At this period there remained some difficulty in her speech,

speech, which yielded to the constant action of the blister. The patient would not admit of the continuance of the stimulus so long as Dr. Naudot wished; for from her employment in the country, she was continually exposed to the heat of the sun. The consequences of her delivery were in every particular natural; a purgative was exhibited after the suppuration of the blister had ceased, which terminated the treatment.

The patient, the subject of this case, came five leagues twenty eight days after the accident to return thanks to Dr. Naudot for his care and attention.

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*Case of an Aneurism of the Femoral Artery, consequent to a Gun-shot Wound.*

[By Mr. MANOURY, Surgeon to the Hôtel Dieu.]

NICOLAS Fourcroy, a gardener, twenty-eight years of age, received a shot from a fusée loaded with bullets and large shot, which went off by accident, at the moment Fourcroy turned round. He was situated at the time he received the shock lower than the person who held the gun. The balls passed through the left thigh, towards the middle and inferior



inferior part. Stunned with the noise, he at first did not perceive that he was wounded; but remarking some drops of blood on his wife, he wished to approach her. He instantly felt an acute pain in his thigh, cried out that it was broke, and fell down. He was taken home, and the surgeon of the place sent for, who did not arrive for three hours after the accident. On examination, he found on the outside and towards the middle, and a little to the inferior part of the thigh, three openings, of the diameter of a writing pen: they were occasioned by three balls, two of which had passed out on the inside of the thigh; the third, which had formed the external opening, had not been impelled with force sufficient to pierce the integuments of the inside of the thigh, under which it was felt by the finger. These different openings were situated above each other about an inch distance; the external was a little higher, and situated more forward than the internal. Mr. Manoury observes, that if he might judge of the direction of the balls by their relative situation, he should suppose that it had passed inferiorly through the skin, the fascia lata, the vastus externus muscle, and the short portion of the biceps femoris; and that it took its course by the inferior and posterior part of the femur, between the bone and the beginning of the popliteal vessels, and that it had divided the femimembranosus, the inferior part of the third adductor, the gracilis internus, and the skin. Mr. Manoury supposes that the ball which had formed the middle hole had passed between the anterior rectus and femoralis,

ralis, had pierced the sartorius, and had left behind it the femoral vessels; and that the ball which produced the superior hole had divided the fascia lata and the femoralis muscle, and had crossed the vessels of the thigh, and afterwards became buried under the integuments, where it was distinctly felt. Mr. Manoury conceives that the last ball, either by dividing or violently contusing the artery, had produced gangrene and other consecutive symptoms, which are about to be related in the order they occurred.

The patient had little hemorrhage in the first instance; and on the arrival of the surgeon it had totally ceased. On examination, he remarked only one ecchymosis, about the size of the palm of the hand, that surrounded the ball situated under the skin. The wounds were dressed with dossils of lint, and a circular bandage applied moderately tight over the whole. The next morning, as the dressings and sheet were a little tinged with blood, the bandage was drawn somewhat tighter; no more blood was discharged; no swelling either of the leg or thigh supervened, both of which retained their natural heat. On the fifth day the wounds began to suppurate. The ball, which had been situated under the integuments, had now pierced the skin: its discharge was accompanied with a quantity of coagulated blood. Injections of barley water and honey were employed to facilitate the discharge of these coagula, and to deterge the wound. They were continued for eight days. The wounds soon cicatrized, and in five weeks the patient was in appearance perfectly cured. The thigh and the



leg were nearly in their natural state. The patient was not sensible of either weakness or pain. A small tumour remained, situated between the two superior wounds, at the internal and anterior part of the thigh; the patient conceived it was a small gland, and that it would disappear of itself: he walked out, and was able to go to mass on the 15th of May, six weeks after the accident.

The tumor, in which no pulsation had been hitherto remarked, increased in size, and pulsation now became evident: it was unattended with pain, and without any discoloration of the skin. Towards the end of May it had increased to the size of a hen's egg, and the pulsations were so strong that they raised the bed cloaths. The patient often experienced a starting sensation in the wounded thigh; he was in pain, and incapable of walking, and was obliged to take to his bed. In the course of eight days, the tumor augmented considerably in size,\* the force of the pulsatory motion decreased in proportion to the augmentation in the size of the tumor, and soon became insensible. The tumor, in a small space of time, acquired a considerable bulk, and the swelling extended to the knee, leg, and foot. The surgeon, who at first had applied a plaister to the part, now employed a poultice made of sorrel, lilly root, and leeks, with a little

\* The heat of the bed and a state of rest might perhaps contribute materially to its sudden increase. Mr. Default has had frequent occasions to remark, that in cases of spurious aneurism they have rapidly increased in size as soon as the patients took to their bed.

lard. The patient's relations, seeing the little success from the remedies employed, called in another surgeon, who applied a poultice of crumb of bread and marshmallow water, mixed up with 3 ij of powder of bark. The size of the tumor, and the swelling of the leg and thigh seemed to diminish. The two surgeons continued to visit the patient; the first, curious to know the nature of the tumor, of which he had not the most distant suspicion, opened it in the absence of the other with a lancet. A few drops of blood, of a bright red colour, were only discharged. Fortunately the lancet did not enter any depth, but only divided the integuments. The pains, however, became more acute, and the patient became very uneasy, and wished to be admitted into the Hôtel Dieu at Paris, where he was received on the 9th of June, 1785. At this period, the tumor extended from the superior and internal quarter of the thigh to the inferior quarter, and from its external part to its internal and posterior side, and projected considerably from the anterior part; the skin was tense, shining, and of a yellow colour; no pulsation was distinguished, nor even the humming noise that is afforded by the spurious aneurism. Mr. Default entertained no doubts of the nature of the disease. The operation for the aneurism promised little success, from the diseased alteration of the parts that composed the tumor, and other unfavourable circumstances; but however it was the only resource to save the patient from inevitable and apparently approaching death. The operation was deferred for some days, with the view of preparing the patient.



From the frequency and hardness of the pulse, it was judged expedient to bleed him three times in the course of the three first days; a clyster was administered morning and evening, to prevent the exertion of going to stool, and a mild regimen prescribed. No topical application whatever was employed, except a circular bandage, which was drawn moderately tight with the view of supporting the integuments, which were so thin and tense, that there was reason to apprehend a rupture; the pulse became less frequent, softer, and the pain evidently diminished. The patient had now sufficient courage to request Mr. Default to perform the operation, which was accordingly done nine days from his admission into the hospital.

The patient was laid on his back, whilst an assistant compressed the artery as it passes under Poupart's ligament, by means of a cushion.\* Mr. Default then made an incision through the integuments in the course of the artery, beginning as high as the tumor, and terminated at its inferior part, extending about nine inches in length; he then prosecuted the incision through the cellular substance and fascia lata, and extracted a number of coagula. This second incision extended from above downwards the same length as the first. The quantity of coagulum and polypus

\* From the extent and situation of the tumor, the tourniquet could not be used; besides, pressure by means of the cushion is in every particular more convenient, and is always preferred to the tourniquet by Mr. Default, who uses it in all operations on the thigh and leg, when it is necessary to attend to the hemorrhage.

concretions of a membranous consistence filled a basin that contained more than two pints and a half of fluid : in the midst of this mass, there was a branch of the internal saphena vein, which was divided in the course of the operation. After all the blood was absorbed, by means of a sponge, the femur was found denuded at the middle and internal part for about three inches in length, and for one inch in width, the fibres of the vastus internus, which covered it in its natural state, being destroyed, as well as those of the triceps and sartorius, which formed part of the body of this tumor. This last muscle was situated on the inside of the incision, in the same manner as the femoral vessels. No blood was discharged from the artery, whilst the pressure was kept up ; but as soon as it was taken off, it spouted with considerable force ; it was again compressed, but in consequence of some derangement in the cushion, the blood continued to flow. Mr. Default pressed the orifice of the artery with his finger till a more exact and efficient pressure was made on the vessel where it passes under Poupart's ligament. On cleaning the wound again with sponge, an oval aperture was discovered in the anterior part of the artery, about four fingers breadth above the part where it pierces the triceps muscle. This oval opening was about three lines in length, and two in width.

Mr. Default passed two ligatures round the artery, immediately above the opening. For this purpose he used a crooked needle, blunted at the point and sides, and armed with two waxed ligatures, which were passed from within outwards. One of the ligatures only was



tightened, and the other left loose, as a provisory one, to be made use of in case of necessity. To tighten the first, he employed a pair of dressing forceps; and after making a single knot, he twisted the ligature round the instrument, and pushed it to some depth; and then by means of the other hand tightened it at pleasure, gradually and without shaking the patient; an inconvenience which is difficult to avoid, when the artery is situated at such a degree of depth. He then, as an additional security, made a second knot with a degree of tightness sufficient to stop the hemorrhage, but not more; for it has been found that arteries are subject to become gangrenous, and consequently to afford a fresh hemorrhage, when the ligatures are drawn too tight.

After this ligature was applied, the blood still continued to flow, not from the superior part of the artery, but from the inferior, round which two ligatures were passed, and one tightened as before. No blood was now discharged, when the pressure was taken off from the crural artery. To distinguish the ligatures that had been tightened, knots were made on their extremities, and left out on the sides of the wound: they were wrapped up in linen, to prevent them being confounded with the lint, or rudely handled in the subsequent dressings. After the wound was well cleaned with warm water and a sponge, it was filled with dry lint sprinkled with colophony; some layers of lint were applied over the whole, covered with compresses, and the whole retained by an eighteen tailed bandage drawn moderately tight. The patient  
passed

passed the whole day quietly, was in good spirits, and slept an hour in the course of the morning; he did not experience the least sensation of cold either in the leg or thigh, on which no topical application was applied: these parts preserved their natural heat, and were free from pain. The patient was kept on strict diet, and the use of lemonade. In the evening, the pulse was raised, but without hardness; the tension and swelling of the foot was already diminished; he passed a good night, and slept several hours. On the second day, there was a slight access of fever; the swelling of the leg and foot dissipated almost perceptibly, and the parts preserved their natural heat and sensibility. The compresses were changed, and the dressings sprinkled with warm water and a little camphorated spirit. On the third day, the pulse though still frequent was softer than in the evening. The small clots, which could not be extracted during the operation, became moist by the serous exudation, and had detached the lint from the bottom of the wound and had passed through the compresses. The dressings were changed, and the lint sprinkled with colophony. On the 4th day, the fever was less, the insensible perspiration increased, the suppuration abundant, and from its viscosity it entangled a quantity of rotten cellular substance, which was discharged from the wound; the pus was absorbed by dossils of lint, and the dressings repeated three times in twenty-four hours, which plan was persisted in till the 42d day. The lips of the wound were dressed with slips of linen dipped in the styrax ointment.



On the 5th day, the patient was extremely well and with little remaining fever. The lint employed for the dressings was always sprinkled with colophony, with the view of its acting as a digestive and procuring a better discharge.

On the 6th, a small hemorrhage took place, which wet through the dressings and the folded sheet placed under the thigh: the attendant surgeon easily stopped it by compressing the artery as it passes under Poupart's ligament. Mr. Default took off the dressings; and after desiring the pressure to be taken off from the artery, with the view of seeing from whence the blood flowed, he observed a few drops come from the superior part of the wound. The two ligatures which had been left loose were now tightened, the inferior as well as the superior: the dressing was continued in the same manner as before, and no more blood was discharged. In the evening he was free from fever and the suppuration was diminished in quantity one half. He was uneasy during the whole night, and had only interrupted sleep.

On the 7th, the patient finding no return of the hemorrhage, was much easier; the fever subsided, the suppuration became again abundant, and even increased, till the 10th, when the wound was injected with decoction of bark to accelerate the detersion of the wound. The patient, who till now had taken nothing but broth, was indulged with soup and a little wine. On the 11th, the suppuration was so abundant, that notwithstanding the frequent application of fresh dressings, a considerable quantity of pus collected

lected at the bottom of the wound, which from its situation could not be discharged, as the incision had been made in the course of the artery and not in the most dependant part of the tumor. To obviate as much as possible any inconvenience resulting, a thick and graduated compress was placed at the posterior and internal part of the thigh.

On the 12th, the collection of pus was less; the patient regained his strength; he was now allowed bread and currant jelly in his soup. On the 15th the two inferior ligatures fell off; the two superior were not detached till three days afterwards.

On the 17th, notwithstanding the graduated compress placed at the posterior and internal part of the thigh, the pus was furnished in such quantity that it again collected at the bottom of the wound. Mr. DeFault for some days previous to this had some intention of making a counter opening, but he waited till such time as he had no reason to apprehend any serious accident from the aneurism: he then divided the integuments, which were very thin. The incision was made towards the third inferior part of the thigh, near the inferior extremity of the first division and at the posterior part of the gracilis internus muscle. Lint was introduced, powdered with colophony, and pledgets applied dipt in decoction of bark and honey of roses.

On the 18th, though the patient was laid on an inclined plane, in such a manner that the trunk and superior part of the thigh were more elevated than the rest of the limb, yet the pus was not discharged  
by



by the counter-opening, and collected as before at the bottom of the wound. The tent of lint was however continued till the 21st day, when it was omitted, as it was of no farther use. The pus was not discharged by the counter-opening, except when the thigh was elevated, being prevented in the intervals between the dressings by the unfavorable position of the limb. The wound made by the counter opening was cicatrized in eight days after the suppression of the lint tent.

On the 24th, the suppuration still continued abundant; and although the strength of the patient was kept up by analeptics, there was reason to apprehend a diarrhæa and consequent weakness. To prevent this, pills were prescribed composed of extract of bark, camphor, and syrup of wormwood.

On the 26th, the granulations, which were pale, were sprinkled with bark, which practice was continued for three days. No apparent advantage being derived, and the discharge still continuing abundant, and the granulations soft and flaccid, an injection was made use of composed of tincture of myrrh and aloes. On the 30th, the injection was repeated each time of dressing, which was now three times in the course of the day.

On the 31st, the suppuration had diminished, and the patient complained of some colicky pains. An emollient enema was thrown up, which procured several stools in the course of the night and the following day. The use of the injection was suppressed and the suppuration became more abundant.

On

On the 33d, he had no stools in the course of the night, the granulations became more firm, the pus improved in quality and diminished in quantity. The wound was less in extent and depth, and covered all over with granulations healthy and firm.

On the 37th, instead of white pus, as in the preceding evening, a yellow matter was discharged resembling a kind of jelly or lymph. The dressings were now only dry lint, a compress, and a circular bandage.

On the 42d, cicatrization was obvious, and the wound was only dressed once a day.

On the 50th, his general appearance improved, the cicatrix advanced, and the discharge still continued of the same quality.

On the 54th, as the granulations were a little spongy, they were touched with the lapis infernalis. This application was renewed the next day.

On the 60th, the cicatrix was nearly finished, and the leg and foot slightly moved.

On the 63d, the patient began to walk with the assistance of crutches. The leg and foot swelled in a slight degree, which subsided on observing an horizontal position.

On the 27th of August, 65 days after the operation, the wound was healed from the bottom and perfectly cicatrized. The patient left the hospital on the 10th of September, when he was capable of walking without crutches. He often returned to the hospital from gratitude. The affected limb soon became as strong as the other.



*Case of a Peasant whose Genital Organs were torn off  
by the Wheel of a Carriage.*

*Extracted from the Bibliotheca Chirurgica of Richter,  
vol. 7, page 594, translated into French from the  
German by M. Brewer, D.M.*

A peasant, 36 years of age, fell from his horse under the wheel of a carriage on the 19th of August, 1782. His apron got entangled in such a manner in the wheel as to draw his breeches along with it, which, together with his genital organs, were entirely torn off. At the moment he did not experience violent pain, nor any loss of recollection: he even got up without assistance, mounted his horse, and regained his own house, which was situated about two hundred paces distant. The hemorrhage, which was trifling, stopt of itself. The wound extended from before backwards; from the superior part of the pubis to within some lines of the margin of the anus; and occupied all the intervening space between the thighs. The urethra was torn off with the penis as far as the neck of the bladder. There remained no vestige either of the scrotum or the right testicle. The left testicle remained only attached to the spermatic cord, and was covered by its tunica vaginalis. The spermatic cord swelled to the size of the testicle itself, and resembled a penis divested of its integuments. The

The prostrate, contused and torn, adhered by a few fibres, and hung out of the wound. Before the margin of the anus, in the right groin, the intestine was exposed, which was the contents of an inguinal hernia with which the patient had been previously afflicted. The wound was dressed, and the patient bled, and ordered a nitrated drink. The pain and fever were not very considerable; the urine, which was suppressed for the first 36 hours, now flowed involuntarily and in great abundance, but the patient soon recovered the power of retaining for six hours or even more.

On the 15th day, the spermatic cord was divided near the abdominal ring, without occasioning the least hemorrhage. On examination the cord was found invested with cellular substance, an inch in thickness, but in a healthy state. The testicle was also perfectly found.\* The patient was continued to be dressed in the same simple manner, and the wound perfectly cured, without any unfavorable accident. The prostrate remained for a considerable time so extremely sensible, that the patient could not admit of its being slightly touched without suffering extreme pain. At length however it got buried in the wound. The denuded intestine also re-entered the abdomen. The patient no sooner began to walk, than a retention of urine

\* Richter here observes, that it would have been sound practice to have preserved this part with the idea that nature would elongate the skin sufficient to cover it, which she has effected in similar cases.



came on in consequence of intemperance : it was accompanied with the general symptoms, which disappeared after a few slight purges. The urinary passages continued to be affected from any intemperate irregularity in his regimen. The cicatrization was perfect in ten weeks after the accident. There remained an opening for the passage of the urine three lines in diameter, situated under the symphysis pubis, a little to the left side. The course of this fistulous opening could not be traced : it was only perceived that the opening of the bladder did not correspond with the external opening, but was rather above its level. To prevent the contraction of this new canal, a canula of horn was introduced. Some time after the patient withdrew it, as it was supposed, and it contracted immediately to such a degree that it was with difficulty a very small tube could be introduced.

The relator of the case has preserved the parts that were torn off in spirit of wine.

*Case of a Patient cut for the Stone when none existed,  
the Symptoms which deceived the Operator, and the  
Appearance of the Parts on Dissection.*

[By M. BLANC.]

**M**R. Blanc was consulted for a child of five years of age, of a good constitution, who for six months experienced great difficulty in passing his urine. From what he learned from the parents of the origin and the course of the disease, united to the rational and existent symptoms, he was led to suspect that there was a stone in the bladder. To be completely convinced, Mr. Blanc passed a hollow sound into that cavity, and felt a body, the collision of which to the finger as well as to the ear persuaded him that it was a stone; but however, to be still more convinced of the fact, he passed his finger up the rectum, and felt very distinctly the body, the presence of which had been felt by the sound. The nature of the disease now being to all appearance clear and decided, Mr. Blanc proposed the operation to the parents; who, from the consideration of the pain attendant on the disease, readily gave their consent. The operation was performed on the 22d of May, 1791, in the presence of Messrs. Derade and Résonard, surgeons. Mr. Blanc made use of Mr. Hawkins's gorget, as improved



improved by Mr. Default. After the parts were properly divided, Mr. Blanc placed the index finger of the right hand on the gorget, and pushed it gently into the bladder. Some difficulty was experienced in the introduction, which induced him to suppose that the incision of the bladder was too small: he then attempted to enlarge it a little by means of the gorget, on which he passed the forceps. The difficulty experienced in moving as well as in opening them, induced him to doubt whether they were in the bladder or no. This was however ascertained by passing the catheter. The forceps were withdrawn, and new but unsuccessful endeavours were made to extract the stone by means of the silver scoop. A noise was however distinctly heard, similar to that which might be supposed to result from the collision of two hard bodies, and which tended still more to confirm the idea of the existence of a calculus. The operation was however protracted for half an hour, during which the child suffered exquisite pain. Mr. Blanc now desisted from any farther researches and ordered the child to be put in the bath, which he supported but half an hour. He was unwilling to take any thing; and they could only get him to swallow a few spoonfuls of broth a considerable time after the operation. During the whole night he was drowsy and heavy; convulsions came on, and at the end of 24 hours the child expired. The opening of the body explained the circumstance that led to the error. No stone was found to exist: but the bladder was found compact, cartilaginous in its circumference, and contracted to such a point, that  
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it was scarce capable to contain two spoonfuls of fluid.

From the incision of the canal of the urethra, of the prostate gland, and of the neck of the bladder, being small in extent, the introduction of the forceps became difficult; and the coats of the bladder were so firm, that they would not admit of being torn. After the kidneys, the ureters, and the bladder, were taken out and examined, it was found that the left kidney was very large, covered with tubercles red and internally, in a state of suppuration. The ureter of the same side was as large as the finger throughout its whole extent; and the coats of this tube resembled the trachea arteria. The right kidney was nearly in a natural state, but the correspondent ureter was sufficiently large to admit a writing pen. But the circumstance that principally led to the supposition of the existence of a stone in the bladder, was the sensation resulting from the presence of the catheter in so confined a cavity, whose coats were of a horny texture, and which gave to the finger and ear the sensation of a hard body, when struck by the beak of the instrument. Even after the bladder was taken out, the assistants all agreed that the collision they felt on introducing the catheter might impose on their sensations. Mr. Deault here remarks, and with great justice, that the causes that led to Mr. Blanc's error, might deceive other lithotomists; and that their publication cannot but be otherwise than useful, without being the least injurious to the deserved reputation of the surgeon.



## LUXATIONS OF THE HUMERUS.

*Luxation downwards.*

## C A S E I.

**M.** BASTEON, 35 years of age, luxated her humerus downwards by a fall on her right elbow, which at the time was distant from the body. The woman came to the hospital on the 7th of September, 1788, a few hours after the accident. The shoulder and arm were lower and the humerus situated more inwards than natural: the acromion projected; beneath which a considerable depression was observed. There was a considerable elevation in the hollow of the axilla, formed by the head of the humerus. The arm would not admit of being carried forwards, backwards, or inwards, without moving the shoulder, and at the same time causing exquisite pain. The motion outwards was easier, and attended with less uneasiness. The reunion of symptoms just described, left no doubt of the existence and nature of the luxation, which was reduced in the following manner.

The patient was seated in a high chair, with the uninjured side against the back. A round thick cushion was placed in the axilla of the affected side, under

under which a sheet was passed folded in such a manner as to form from four to five inches in width : the ends of this sheet were united above the healthy shoulder and held by two assistants, which served to fix the trunk and to keep up a constant extension without acting on the pectoralis major and the latissimus dorsi. Two other assistants kept up an extension by holding the fore-arm above the wrist. They then conducted the arm gradually towards the side, whilst Mr. Default drew the superior part of the arm upwards, with the intention of conducting it into the glenoid cavity. It was reduced in this manner with the greatest facility, and from this time the patient could execute the different motions of the arm without the least inconvenience. A slight pain remained in the articulation, which was soon removed by wearing the arm in a sling and approaching it close to the trunk. The shoulder was bathed with the *aq. vegito*. By means of exercise the stiffness of the limb subsided; and ten days from the time of the reduction, the patient was as well as before the accident.



## C A S E II.

[By Mr. ANTHAUME, Surgeon to the Hôtel Dieu.]

**J** SELIGNÉ, a robust man, 44 years of age, fell on the point of his shoulder from a height about nine feet, on the 19th of July, 1791. The pain, which was increased on moving the arm, and the swelling which took place almost instantly, determined him to apply the same day at the Hôtel Dieu. Independent of the symptoms pointed out in the preceding case, and which characterized a luxation of the arm, there was an extraordinary degree of mobility in the head of the humerus. This part would admit of being moved with equal facility against the external edge of the pectoralis major, the anterior edge of the latissimus dorsi, and against the skin of the axilla, according to the different directions given to the motions of the arm:—circumstances that led to the supposition that the head of the bone was out of the capsular ligament. The same means of reduction were employed as in the preceding case. Two assistants kept up an extension by means of a napkin secured round the wrist of the patient, whilst two others kept the trunk fixed by means of a sheet, whose action on the muscles was prevented as before by the introduction of a cushion in the axilla. Their endeavours were however ineffectual for some time; and it was  
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not till after an equal and constant extension had been kept up for some minutes, that the muscles, wearied out, suffered the head of the humerus to slip into the glenoid cavity. The bone appeared to have regained its cavity, although its reduction was not attended with that noise which almost always occurs in recent luxations; but soon afterwards the bone was again dislocated, nor was the reduction possible.

From this circumstance Mr. Default judged that the head of the bone had pushed before it the capsular ligament, into which cavity it could not re-enter, from the narrowness of the aperture formed at the time of the luxation. In consequence of this opinion, he moved the arm in every possible direction, with the view of enlarging the opening. He soon felt something tear, which apprized him that his views were accomplished. The extension was again commenced, with a view of vanquishing the resistance of the muscles. No difficulty was now experienced in the reduction. The humerus was however very much disposed to be luxated, and to prevent it, a dressing was employed nearly similar to what is recommended in the first volume of the Journal for fractures of the clavicle. The whole shoulder was covered with a poultice moistened with aq. veg. The next day the patient was feverish; the tongue was covered with a thick and yellow mucus; the mouth bitter, accompanied with frequent nausea. A grain of emetic tartar was added to his drink, which procured some bilious stools, and produced a disappearance of the symptoms. A considerable swelling now affected the



shoulder, which disappeared in five days from the constant application of the cataplasm.

On the 6th day, a new bilious disposition manifested itself, which was successfully combated by a grain of emetic tartar infused in a pint of drink. From this day constant exercise was employed, with the view of dissipating a considerable stiffness which still existed in the articulation. This rigidity of the joint gradually diminished, and in such a manner, that at the end of a month he was capable of executing all the different motions of the arm, but with some degree of difficulty and constraint.

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*Case of a Luxation inwards.*

[By Mr. FAUCHERON, formerly Surgeon to the  
Hôtel Dieu,]

**M.** GORRON, 63 years of age, as she was carrying a burthen was thrown down, on the right side. At the instant, the elbow was removed from the body and carried a little backwards. She pitched on this part against the pavement. A great portion of the head of the humerus being pushed downwards and inwards, passed out of the articular cavity, tore the

the capsular ligament, and became situated between the subscapularis muscle and the fossa of the same name.

This woman, who came immediately to the Hôtel Dieu, had the affected shoulder lower than the other, and the fore-arm in a state of demi-flexion. The humerus was directed towards the middle of the clavicle, the elbow removed from the trunk and situated a little backwards. A depression was remarked under the acromion and an obvious projection under the pectoralis major. Mr. Default having seated the patient in a chair, placed the hand of the affected side between his knees, and whilst he kept up an extension in this manner, conducted with his hands the head of the humerus into its cavity, by drawing upwards and backwards the superior part of the arm. After the reduction was completed, the shoulder was covered with a cataplasm moistened with aq. veg. As neither swelling or pain supervened, no application was used after the third day. The woman left the hospital on the 7th day, and executed every motion of the arm with ease and convenience.

*Three more cases of Luxations of the Humerus are related in the Journal de Chirurgie; but as nearly the same means were adopted for their reduction, and as the circumstances vary but little, the Translator has omitted their insertion.*



*The GENERAL HISTORY of the Treatment of  
Luxations.*

The contemporaries of Hippocrates distinguished luxations of the humerus into four sorts; upwards, downwards, forwards, and backwards: but this celebrated writer admitted only of the luxation downwards, the only one he had met with in his practice. He proves at length, that the accident which in his time was taken for a luxation forwards, was nothing else but a projection of the head of the bone, which naturally in thin persons is extremely obvious; a disposition of parts that many physicians of his time mistook for a diseased alteration. To distinguish a luxation, we are recommended by this author to compare the affected with the other side, and to be cautious not to be deceived by the extraordinary situation of the arm and the difficulty of motion; symptoms in themselves equivocal, and often produced by a simple contusion, and the consequent pain.

The symptoms that are mentioned by Hippocrates, as characteristic of this accident, are a tumor in the axilla formed by the head of the bone, a cavity in that part naturally occupied by the superior part of the bone, and a projection formed by the acromion above this cavity. This last symptom, he mentions, is equivocal, as it occurs equally in fractures of the  
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apophysis. In this luxation the elbow is separated from the trunk, nor can it be approached but by external force, which produces violent pain. The fore-arm remains always in such a state of extension, that it cannot be sufficiently bent for the patient to carry his hand to his ear.

For the reduction, Hippocrates first describes the most simple means, which were employed by the wrestlers and athletæ, who were constantly subject to this accident. He afterwards points out more complicated methods, of which physicians might avail themselves when the former means were found inadequate to the end. The first method was to place the fist in the patient's axilla, to raise the head of the bone, bringing at the same time the elbow from the sides, and pushing it against the ribs with the knee, or by means of an assistant, who was desired to apply his forehead at the same time against the shoulder as a support.

The second was to place the fore-arm of the affected side behind the back; then with one hand to grasp the elbow, and push the humerus upwards, whilst the other was situated at the posterior part of the articulation to support the shoulder. These two methods, rude and indifferent as they are, were frequently attended with success.

In the third, the patient was laid on his back, whilst the surgeon, seated on the same side as the luxated limb, kept up an extension on the wrist, pushing in the head of the bone by means of the heel in the axilla, in the cavity of which, and as close as possible to



to the ribs, a cushion or ball was directed to be placed. During this time, an assistant, seated behind the head of the patient, pushed the shoulder down with his foot, retaining the ball at the same time in its situation by means of a band which he drew towards him.

The fourth method was to place the axilla of the luxated side on the shoulder of a vigorous and taller man than the patient, who was to raise himself suddenly, and draw down the patient's arm; the trunk then remained suspended, and formed a counter-poise.

Such were the modes employed by the wrestlers and others engaged in gymnastic exercises from time immemorial. The means of reduction in use since the time of Hippocrates, and which are to be found in all modern books, are only machines substituted for simple methods, acting certainly on the same principle but susceptible of greater force, such as the pestle, the ladder, and the machine so famous by the name of *ambi*, an instrument preferred to all others by Hippocrates; and which he conceived adequate to the reduction of luxations, even of long standing. The pestle was nothing else but the instrument of that name, or simply a stick, one end of which rested on the ground or on a table, whilst the other, well-guarded with linen, was placed in the cavity of the axilla, and served to push up the head of the bone; an extension was made on the arm, whilst an assistant kept the trunk fixed, pressing the shoulder down at the same time. The ladder was employed on the same plan, after an eminence was formed and sufficiently guarded to be adapted to the cavity of the axilla.

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The ambi, as recommended by Hippocrates, was not a very complicated machine: it was simply a piece of wood or a plank, about two fingers breadth in thickness, nearly of the same length as the luxated limb, and wide in proportion to the size of the arm. One of the extremities terminated like a wedge, rounded in its circumference with a small edge, which was situated between the trunk and the head of the bone when the instrument was applied to the axilla. The instrument was then applied to the whole length of the arm, and secured by a number of bands; one near the neck of the humerus, another above the condyles, and the third to the wrist. The axilla, or rather the correspondent portion of the instrument, was fixed to a cross bar supported by two uprights, and sufficiently raised to compel the patient to stand on tip-toe. An assistant retained the trunk, towards whom the surgeon conducted the arm, forming a quadrature of a circle.

For want of a cross bar fixed on two uprights, a ladder, a door, and the back of a chair, have been employed, with the patient seated sideways.

Hippocrates remarks, that luxations happen more rarely, and are more difficult to reduce, in strong and muscular habits, than in weak persons, whose joints are relaxed.

When the luxation is recent, the reduction is effected with ease, often before the<sup>o</sup> operator has conceived that he has made a sufficient extension; but it is very different with luxations of long standing; and when reduced, it is difficult to retain the bone in its  
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situation, from the tendency of the humerus to slip out of its situation, from a fleshy excrescence that often forms in the glenoid cavity.

The precaution we should observe, to prevent this from happening, is to keep the arm close to the trunk, and support the elbow by means of a bandage, first filling up the cavity of the axilla. This practice should never be neglected, though neither pain or difficulty of motion should exist. When inflammation supervenes, we have less reason to apprehend a relapse, but then we have difficulty of motion consequent to the swelling and pain in these cases.

Hippocrates recommends the application of a cerate to the shoulder with thick compresses supported by a bandage; but the remedy on which he places the principal reliance is friction on the part affected; a method well calculated to give tone to relaxed parts, and to relax those that are too rigid.

Such is the abridgement of the practice of Hippocrates on the subject of luxations of the humerus produced by an external cause. Celsus, in addition to the symptoms of the luxation downwards, mentions that the arm is longer than that of the opposite side. This author admits of the luxation inwards, in which case the arm is extended, though less than natural, and the elbow is brought with more difficulty forward than backward. For the reduction of the luxation downwards, when the patient is not very strong, he recommends him to be seated in a high chair; and whilst two assistants keep up an extension on the arm, and a counter extension on the scapula, the surgeon  
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pushes in the head of the bone with his knee placed in the axilla, retaining the scapula with one hand, and with the other debases the arm to the trunk. In the most difficult cases he has recourse to the ambi of Hippocrates with the ladder.

To reduce the dislocation forward, he laid the patient on his back. An assistant extended the arm, whilst another, situated behind the head of the patient, kept up a counter extension by means of a band placed under the axilla of the luxated side. During this time, the surgeon with one hand turned away the patient's head, and with the other pushed the shoulder upwards, and in this way pushed the head of the humerus into its cavity. The author adds, that this is less difficult of reduction than the luxation downwards.

Galen, in his commentaries on Hippocrates, says, that the humerus can be luxated downwards, upwards, outwards, and forwards, on account of there being no opposition neither on the side of the articulation nor from the surrounding parts. He does not, however, instance a case of a luxation forwards. With respect to the luxation upwards, which he thinks possible, and the luxation inwards, which he conceives impossible, it is difficult to comprehend what he means.

The physician of Pergamus attributes the weakness and thinness that supervenes in the muscles of the limb, when incapable of being reduced, to want of exercise; a circumstance that escaped the notice of Hippocrates.

Oribasius,



Oribasius, in that part of his compilation preserved by Heliódorus, admits the luxation of the humerus downwards, (when the head of the bone is in the axilla,) forwards and backwards. He carefully describes many complicated machines, invented and employed by his predecessors when the ordinary methods were found insufficient.

The first of these machines is a ladder, nearly resembling that of Hippocrates. To that rounded part of the ladder destined for the reception of the axilla was attached a piece of wood cut out in a wedge-like form, the thick and round part of which (guarded with a kind of mattrafs) was placed from the side of the trunk. At the bottom of the ladder was a kind of roller, similar to the axle tree of a hand-mill, which kept up the extension of the arm by means of a band fixed above the condyles of the humerus, the ends of which were attached to this kind of axle tree, round which they revolved; whilst the trunk of the patient, suspended on the other side of the ladder, formed a counter extension. This machine served for every species of luxation: the procedure of the surgeons and his assistants only varied.

In the luxation downwards, when the axle tree had kept up a sufficient extension, the surgeon drew the superior part of the arm upwards and outwards, by means of the end of a bandage, the middle of which was carried under the axilla: the axle tree was then loosed and the head of the bone conducted into its cavity. To reduce the luxation forwards, a stronger extension was kept up than for the preceding. The  
surgeon

surgeon with one hand conducted the elbow forwards and against the ladder, and pushed the head of the bone backwards by pressing with the palm of his hand that eminence which is formed by the pectoralis muscle. During this time an assistant supported the scapula, whilst another with his hands round the patient's neck drew the trunk from the side opposite to the extension.

The reduction of the dislocation outwards was performed in the same way, except that the direction was precisely contrary.

Some practitioners recommend the extension to be made differently—the band to be fixed above and the condyles of the humerus attached to one of the lower steps of the ladder. The middle of a long cord, placed under the axilla, embraced the shoulder; its ends were passed in two pulleys at the top of the ladder, then descended to be attached to the axle tree, in such a way that the extension was formed by the elevation of the shoulder, whilst the arm remained fixed. Oribasius does not approve of this method. When the patient was incapable of standing upright, they placed horizontally a ladder or a bench pierced with holes, to which the bands and the axle tree was fixed. For the luxation downwards and forwards they laid the patient on his back, and on his belly for the luxation backwards. They maintained a counter extension by means of a band which embraced the axilla of the patient, and whose ends, directed obliquely from the opposite side, were secured on the other side of the head: or conformable



formable to Oribasius's plan, fixed the trunk by a band which passed round the thorax under the axilla.

The same author describes another machine which acts on the same principle. This was a kind of chair, the back of which was raised in such a way that the patient remained suspended. When the axilla was placed on the superior cross bar, this cross bar revolved round, by which means it inclined the kind of wedge which was placed in the middle. It was fixed by a peg. The extension was kept up by a similar axle tree to that of the ladder; with this difference, that the ends of the bands fixed on the humerus were reflected by fixed pulleys placed above and below the axle tree, before it was secured to the instrument.

Paulus Eginetus admits with Oribasius three species of luxations;—downwards, which occurs most frequently; inwards and outwards, which happen more rarely. The ambi, which he employed for the reduction, was rounded like a pestle at the end, which corresponded to the axilla; instead of thin and hollow, like the ambi proposed by Hippocrates and adopted by Celsus.

Paulus Eginetus even wished that the cross bar or ladder which supported the injured axilla during the reduction, should be raised in such a way as to suspend the trunk of the patient. Avicenna admitted the luxation outwards and rejected all the rest: he made use of the ladder and the door in the same manner as the moderns have since employed them; that is to say, that the counter extension was kept up by the suspended body, whilst the extension was made  
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on the arm. He also employed the pestle; but instead of supporting it, like the Greeks, on the earth or on a table, he caused it to be held by a strong man, who exerted all his strength to push up the head of the humerus. This author was acquainted with the paralyfis which often occurs subsequent to a luxation and regarded this accident as the natural effects of violent extension..

Albucasis also admits of three species of luxation, but different to those mentioned by Oribasius and Paulus: one downwards, in the axilla; one forwards, on the side of the thorax; and a third, which very rarely occurs, upwards, at the superior part of the shoulder; the Arabian surgeon only employed his hands for the extension and conformation when the luxation was forwards; when the reduction was difficult he used baths and embrocations. Ambrose Paré admits of the luxation upwards; in which case the head of the humerus is situated behind the clavicle. To reduce it, he raised the elbow in removing it from the trunk; pressing at the same time on the head of the bone; or laid the patient on his back, and had the extension kept up by an assistant. For the luxation downwards he employed the means recommended by Hippocrates. He prefers the ambi to all the others. The one he uses is mounted on a beam, securely fixed by a peg of iron, which passes in a hole pierced near the extremity that ought to be placed under the axilla. One of his contemporaries added two wings to this instrument, which embraced for-



wards and backwards the superior part of the arm and prevented it from shaking.

In difficult cases, Paré made use of pulleys to keep up the extension. One end of the pully was attached to the arm and the other to a fixed point : one assistant retained the trunk, by means of a band passed on the patients shoulder, the ends of which he drew downwards and backwards.

Fabricius Hildanus employed also the pully ; but instead of fixing them as Paré, above the condyles of the humerus, he attached them to the wrist : for the counter extension he contrived an iron ball guarded with compresses, supported with a handle of the same metal, which was fixed by means of a screw on the bench where the patient was laid.

Petit distinguishes four cases of luxation of the arm : downwards on the side of the scapula ; outwards on the spine of that bone ; inwards in the hollow of the axilla ; and forwards against the coracoid process of the scapula and the clavicle. He observes that the arm is rarely luxated directly downwards and that it is with difficulty luxated outwards. The symptoms of the luxation downwards are those pointed out by Hippocrates and Celsus.

In the luxation outwards the elbow is carried inwards and approaches the thorax. The patient is in pain when it is removed. The arm is almost always longer than that of the opposite side. In the luxation in the axilla, the symptoms are the same as when luxated downwards, except that the elbow is carried a little backwards and the fore-arm bent ; the arm is  
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generally longer than natural. The signs of a luxation forwards are, a tumor formed by the head of the bone, which is felt between the coracoid process and the clavicle, a cavity under the acromion, but less than in luxations downwards; the arm is shortened, the fore-arm a little bent, the elbow more separated from the trunk and situated more backwards than in other luxations. When the head of the humerus is situated forwards, under the pectoral muscle, it is difficult to reduce; when situated outwards, is easy; but the most favorable of all is the dislocation directly downwards. On the contrary, when the humerus is deeply pushed in, and the head of the bone situated under the axilla, it is always attended with danger, as the head of the bone presses on the axillary vessels and nerves, and produces a train of very serious symptoms. With fat people these luxations are difficult to reduce.

This celebrated practitioner has analysed the greatest part of the different methods employed by Hippocrates, and has pointed out their inconveniences. He prefers the following method, though he does not conceive it will be efficient in every case: he keeps up the extension by means of assistants; who hold the inferior part of the arm whilst others keep the trunk and the scapula fixed; the surgeon then attempts the reduction by embracing with his hands the superior part of the humerus, and raising it with a towel passed under the injured axilla and tied round his neck. In these difficult cases, Petit invented a machine calculated to reduce every species of luxation of



the arm: this is a pully attached to a kind of ambí, composed of two beams joined together by cross bars: this machine terminates on one side by two branches, which are placed both behind and before the breast; a piece of ticking, with a hole rent in the middle for the introduction of the patient's arm, serving as an "*arc boutant*" according to the expression of the patient, by means of a pouch which terminates it on each side, and in which the correspondent portion of the machine was engaged. The fixed part of the pully was of the opposite side to these branches. A silk cord that passed on the pullies was fixed by one end above the condyles of the humerus, and the other to the axle tree. The surgeon inclines the machine, more or less, with the view of relaxing the muscles as much as possible; pressing the extremity of the machine, where the pully is attached, against the ground, with one hand he then makes the extension, by moving the axle tree, and with the other presses against the superior part of the humerus. After the reduction, Petit applies compresses dipped in alum and brandy, and retained by means of the spica bandage. The fore-arm was supported in a sling.

Heister enumerates four species of luxation: downwards in the axilla; forwards under the pectoralis; backwards under the scapula; and outwards under the spine of that bone.

This surgeon points out a great number of machines for the reduction of the humerus, but does not hold them in high estimation. He adopts the opinion of Goussier and Douglass; who absolutely reject the

the use of all sorts of machines, and concurs in thinking that robust and intelligent assistants are adequate to the purpose.

Duvernay is desirous to prove, that the luxation of the humerus is in the first instance downwards, as Hippocrates has observed, and that the luxations forwards and backwards are only consecutive. This author conceives that in the luxation forwards the head of the bone is situated between the pectoralis major and minor. He suggests an improvement on the ambi of Hippocrates.

DuPuy, Fabre and Hevin, decline the use of machines. They keep up an extension on the wrist and a counter extension on the superior part of the thorax, by means of a napkin placed on a cushion, which filled up the cavity of the axilla to prevent any compression on the pectoralis major and latissimus dorsi. German surgeons concur in opinion with Petit that it is important to keep the scapula fixed at the time the counter-extension is kept up. Richter, in the 7th volume of the *Bibliotheca Chirurgica*, mentions a machine, simple in its construction, invented by a Mr. Hufsch, surgeon, of Amsterdam, which is preferred by the Dutch to all others, but he has not given a description of this instrument.

According to Bell, the humerus is more frequently luxated downwards in the axilla, sometimes downwards and forwards, and very rarely downwards and outwards under the spine of the scapula. This surgeon describes the means of reduction most in use, and considers their advantages and inconveniences :



he has also given an engraving of the ambi, as improved by Freke, which is the same as Duverney's, with the addition of an axle tree. When this machine is employed, the counter-extension is kept up by means of a girth placed on the injured shoulder, and secured to an iron pin fixed in the floor, near the feet of the patient, and of the side opposed to the luxation. This author disapproves of every species of lever, and thinks, with Heister, that the reduction may be always effected without the assistance of machines, at least when it is recent. Mr. Bell observes, that success is more frequently obtained by the art with which the extension is directed than by actual force. He recommends the surgeon to act in such a way as to relax the pectoralis and other muscles at the time the extension is made.

What has been related is nearly the practice observed by the ancients and moderns. We see that authors disagree concerning the place by which the head of the bone escapes, and its situation subsequent to its dislocation from the articular cavity. We find in the works of the best writers the same species of luxation indicated under different names and the same names applied to different species. After this is it astonishing therefore that our ideas should be confused on this subject? It is however of the first importance to ascertain, in each species of luxation, the precise part of the glenoid cavity from which the head of the bone has escaped, the rout that it has followed, and the place where it is situated. An acquaintance with these circumstances would tend much to point out a proper  
 • applica-

application of the curative means. Let us suppose the glenoid cavity to consist of four edges; a superior, an inferior, an internal, and an external. It is evident that the bone cannot escape by the superior edge: the tendon of the biceps, the supra spinatus, the coracoid and acromion processes, the triangular ligament and the deltoid muscle form on this side an insurmountable barrier. It is not the same with respect to the three others: neither the nature of the articulation or the surrounding parts afford an insurmountable obstacle to the luxation of this bone; for by the application of an adequate force it will admit of being dislocated at either of its sides.

In the luxation downwards, the head of the humerus passes out of the inferior part of the capsular ligament, and is situated between the tendon of the anconæus magnus and that of the subscapularis, under the inferior edge of the scapula. In the luxation inwards, the head of the bone escapes at the internal edge of the articulation, and becomes lodged between the muscle and the subscapularis fossa. If the bone is luxated outwards, it will be situated between the supra spinatus and the fossa of the same name, after having torn the external part of the capsule. The two first kind of luxations are frequent, and generally occasioned by falls. A fall on the side, whilst the arm is separated from the trunk, the elbow raised, the direction of the head of the humerus downwards, and indeed almost out of the cavity, will stretch violently the inferior part of the ligament; and if the fall is vio-



lent, the ligament will be torn, and the humerus luxated downwards.

The luxation inwards takes place on the same principles, if the elbow is situated behind and removed from the trunk. With respect to the luxation outwards, it is necessarily a rare occurrence, as no cases have been hitherto related. We can conceive that it only can happen but at the time the arm is brought to the trunk, and carried towards the opposite shoulder. This accident rarely happens without a concurrence of very extraordinary circumstances. Such are the luxations that we may term primitive. The head of the bone, when it has passed out of its cavity, does not always rest in the part where it was originally situated : a fresh fall, the efforts of the patient, the inconsiderate conduct of the assistants, and a number of other causes, may produce an alteration in the nature of the luxation, which we term consecutive. It is thus, that when the humerus is in the first instance luxated downwards, it passes between the fossa and the subscapularis muscle to form the consecutive luxation inwards. It is thus that the consecutive luxation takes place upwards, when the head of the bone passes by the inferior or internal part of the capsule, and mounts afterwards behind the clavicle. If this third species is not what Galen means by his luxation upwards, it is certainly what is meant by Paré ; and the manner in which it has been described by this last author, proves that he has met with it in his practice. However it is a rare accident ; and the bone mounts but

but by slow degrees behind the clavicle, and a considerable time after the primitive luxation.

Mr. Default has preserved, in his anatomical cabinet, an instance of this species of luxation. The head had formed a new articular cavity behind the clavicle, and was united to the surrounding parts by new formed ligaments.

On the whole, we may distinguish five species of luxations of the arm : 1. the primitive luxation downwards ; 2. the primitive luxation inwards ; 3. the primitive luxation downwards, and consecutively inwards ;\* 4. the primitive luxation downwards or inwards, and consecutively upwards ; 5. the luxation outwards and backwards.

The luxation downwards is always primitive, and when upwards always consecutive ; but the two species of luxation forward are incapable of being distinguished from each other ; the commemorative signs are the only means to distinguish them ; and it would be the same with luxations outwards, if they were sometimes primitive and sometimes consecutive. Agreeable to Petit's idea, and other subsequent writers, if it is not always easy to distinguish whether luxations are primitive or consecutive, we can however find no difficulty in discovering the particular species. The fracture of the acromion has imposed on practitioners since the time of Hippocrates, as the projection of this process was the only object of their

\* These two last species are the same without doubt as the luxation downwards of Hippocrates and Petit.



attention. It was the same with the fracture of the clavicle, which deceived the wrestlers in the time of Galen : but this could never happen to a judicious and attentive surgeon. A fracture of the neck of the humerus is very apt to lead to an erroneous prognostic.

Often the superior extremity of the displaced fragment of the bone is situated forwards and inwards, and seems directed towards the middle of the clavicle; the elbow is situated behind; the arm, removed from the trunk, cannot be brought to the body without pain, and the shoulder is unnaturally depressed, even more than in a luxation. This last circumstance will alone throw light on the nature of the complaint; but there are other characteristic signs, which in general will lead to a discovery of this accident.

When swelling has not supervened, the end of the inferior fragment may be felt, which, from the touch, is easy to distinguish from the head of the bone; and unless there is extraordinary tumefaction of the shoulder, we may be always certain that the head of the humerus is in the cavity, and that it is no longer the center of revolution for the arm; the crepitus may also be generally felt, at least when the fracture is recent. The means that have been adopted for the reduction of luxations may be divided into three general classes : in the one, the bone is pushed into the articular cavity without any sensible extension; in the other, the head of the humerus is disengaged by the extension, and by the adjacent parts conducted into  
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its natural situation; and a third class is the result of the other two methods combined.

All the means employed by Hippocrates, excepting one, were by impulsion. When the fist was placed in the axilla, and the elbow removed from the trunk, the head of the humerus was pushed outwards, at the same time that it was drawn upwards, as much by the action of the muscles as by the reaction of the superior motion of the capsular ligament. From the combination of these two forces there results one effect, absolutely the same as when the elbow is pushed from behind forwards and from below upwards, as in the second mode adopted by the gymnastics.

In both cases nothing more is done than forcing the head of the humerus to slide on the inferior edge of the scapula, as on an inclined plane : it is the same with the fourth method, where the patient is lifted on the shoulders of a strong man. The ambi, in whatever manner it is applied, acts on the same principle, as it is only a longer and a stronger lever substituted for one of less length and force, which in the other methods was formed by the arm.

All these various methods may be employed, though not without bruising in a greater or less degree the head of the humerus itself, and the parts with which it is connected ; but in cases of luxations inwards, to this first inconvenience we may add their inutility, independent of the bruising and contusion, which in this case will produce very serious consequences. The head of the humerus does not, as in  
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the luxation downwards, form an inclined plane ; for instead of sliding into the glenoid cavity, it is pushed more under the subscapulary fossa, where it remounts behind the clavicle. It is also often impossible to discover the side in which is the aperture in the capsular ligament.

Extension is not productive of these inconveniences, for by this method the articulation and the adjacent parts are not subject to contusion. Extension is calculated for every species of luxation, and its application does not require the surgeon to be acquainted with the precise situation of the opening in the capsular ligament : if the extension is conveniently applied and properly directed, the reduction generally takes place of itself. In the luxation downwards, for example, the humerus cannot descend, without pulling down in folds the deltoid, the supra-spinatus, the tendon of the biceps, the infra-spinatus, the subscapularis, and even the capsular ligament itself. These parts, brought back into their situation by means of extension, carry the head of the humerus upwards ; whilst the tendon of the triceps, which had been pushed downwards, is now raised, and concurs in the same action, the effect of which is necessarily to carry the bone into the articular cavity. In the luxation inwards, the parts situated on the outside of the articulation are dragged forwards and inwards by the head of the humerus, and those situated on the inside are pushed in the same direction. Both of these, during their extension, drag or push the head of the bone backwards and outwards.

In

In the primitive luxation downwards, and consecutively inwards or even upwards, the head of the humerus, passing through the inferior part of the capsular ligament, drags first downwards, then forwards and upwards, the muscles, and all the parts which cover the superior edge of the articulation, and those on its internal side.

When these parts are extended, will they not, in the first instance, pull the bone downwards, then outwards and upwards, and in fact make it pass a contrary course to what it took when the luxation took place? It is then evident that extension will be sufficient in all these cases for the reduction without any other disposition of the parts, unless adhesion to the surrounding parts has taken place, or the action of the muscles altered, from the length of time that has passed since the luxation originally took place. It sometimes happens that recent luxations are difficult of reduction, although the head of the bone may be easily directed towards the glenoid cavity.

Sometimes the opening in the capsular ligament is too narrow to permit the bone to repass through it, whilst the extension is kept up. The head of the bone, in passing into the articular cavity, conveys with it a portion of the capsular ligament, which is again pushed out of the cavity, as soon as the arm is left to itself. It is perhaps in similar cases that we have sometimes seen rash and ignorant empirics succeed by means of giving extensive motion to the arm, when regular surgeons have viewed them as irreducible.

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There is one very serious symptom, to which authors have not particularly attended: this is the palsy, which is sometimes consequent to the luxation inwards. Modern practitioners know, that this accident is the effect of compression or contusion of the nerves by the head of the bone, a circumstance which should be explained to the patient.

With respect to the pain and swelling which may supervene after reduction, the cataplasm moistened with aq. veg. is the application most in repute.

### REFLECTIONS *and* OBSERVATIONS *on the* Puncture *of the* Bladder.

[By Mr. NOEL, formerly Surgeon Major in the French and American Armies, and now Surgeon in Chief to the Hôtel Dieu at Rheims.]

**A**MONGST the great number of causes productive of retention of urine in the bladder, there is none more frequent than the diseases of the urethra. The majority of practitioners are perfectly aware, that these obstructions cannot be cured but by persisting in the use of a bougie for a considerable time and in these cases its introduction requires practice and dexterity. It often happens that by ill-directed endeavours,

endeavours, instead of removing them, they are augmented and increased to such a degree, that the most expert operator cannot introduce the catheter. When the disease has attained this height it is necessary to have recourse to the puncture. This operation is performed in three different ways: 1. up the rectum, 2. in perinæo, 3. by the hypogastric region. Mr. Noël is of opinion, that the operation up the rectum is embarrassing, and subject to many inconveniences. When the canula of the trocar is left in the intestine, till such time as the natural course of the urine is re-established, there is considerable pain induced every time the instrument is moved, or the patient has occasion to go to stool; if, on the contrary, it is withdrawn as soon as the urine is evacuated, does not it often happen that the artificial opening closes before the natural one is re-established? a circumstance which renders a renewal of the operation necessary. In the operation in perinæo, there is reason to apprehend very serious symptoms, as the instrument must pass through parts in a state of disease, or near becoming so. It is certain, that in the species of retention now treated on, sometimes the perinæum and scrotum partake of that inflammation which affected primarily the canal of the urethra; and it is not uncommon to see these parts affected with gangrene, consequent to the ineffectual methods employed for the cure of the disease. According to Mr. Noël's opinion, the section in the hypogastric region merits the preference; as puncturing the bladder in this way is exempt from the danger and inconveniences



niences attendant on the other methods. The part to be punctured is removed from the seat of the disease, and the canula of the trocar can be securely fixed, without the least pain or inconvenience; and whatever some authors may assert to the contrary, the urine, Mr. Noel asserts, passes out with the greatest facility. Mr. Noel then relates the following cases in support of the justice of his opinion.

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### C A S E I.

**I**N the month of March, 1787, a man, 60 years of age, who for many years had been subject to obstructions in his urethra, and was in the habit of introducing bougies himself, one day was unfortunate enough not to succeed; on the contrary, the different attempts that he had made brought on a total suppression. Immediately the usual means were employed for his relief, such as bleeding, the warm bath, drinks, &c. but without success; and after trying ineffectually to pass both a silver catheter and one of the elastic gum, Mr. Noel was called in. From the extreme tension of the lower abdominal region, and the violent pain in the loins, Mr. Noel concluded no time was to be lost, and that recourse should be had immediately to the puncture. The patient  
was

was placed against the edge of the bed in an upright posture, and supported by two assistants. Mr. Noel then plunged a curved trocar immediately above the symphisis pubis into the bladder. This instrument was about four inches and a half in length. As soon as the stilet was withdrawn, and the canula left in the bladder, the urine flowed out with even more facility than from a healthy urethra; the patient observed that he experienced very little pain. The orifice of the canula was closed with a small cork, and maintained in its situation by a bandage passed round the body. The whole was covered with a napkin three times folded, passed under the loins, and secured to the side by three strings. To prevent the derangement that the napkin might occasion to the cork and to the projecting extremity of the canula, they were surrounded with a linen ring or pad about two inches in diameter and one inch in thickness. When the patient had occasion to make water, he unloosed the strings of the napkin, withdrew the cork from the canula, and then by inclining a little either to the right or left, he passed his urine without the least difficulty. Mr. Noel remarked from the first day some tension in perinæo, which propagated itself to the scrotum: this swelling became considerable, and in eight days terminated in a gangrenous abscess, which was opened, and nearly a pint of putrid matter discharged; half the scrotum was thrown off in gangrenous sloughs; but the testicles having remounted towards the abdominal rings, the rest of this pouch was sufficient to invest them. As soon as the principal



pal symptoms began to subside, Mr. Noel attempted to introduce a small bougie of the elastic gum into the urethra; though the resistance was not great, Mr. Noel thought it prudent not to use too much force. The next day he succeeded in passing it into the bladder, and left it in the urethra for two hours before he withdrew it. From this time the urine began to flow in small quantities for the course of a month. Mr. Noel pursued the same plan every day, augmenting from time to time the size of the bougies and suffering them to remain a longer time in the passage. When Mr. Noel found that the urine passed in a full stream, he withdrew the canula, and in two days the wound was entirely closed. He remarks, that he could have withdrawn it sooner; but as it occasioned no uneasiness to the patient, and as he was able to pass and repass from his chamber, he conceived it most eligible to let it remain until the obstructions in the urethra were completely removed. From this time he has never had occasion to have recourse to bougies, the use of which he could not dispense with for a month for many years.

## C A S E II.

**I**N July, 1788, Mr. Noel was called in to a case of retention of urine, dependent on the same causes as the preceding case. The perinæum, as well as the scrotum, was swelled, but they were attended with less pain than in the preceding cases. The patient was afraid of the operation; and to prevent it being necessary, he drank very little for the space of five days. In consequence of this prudent precaution, the tension of the hypogastric region was not considerable.\* Mr. Noel did not propose the puncture, or even bleeding, from the opinion that a gangrenous deposit would take place; and in fact the next day, on opening the inferior part of the scrotum, a prodigious quantity of putrid matter was discharged. This produced a relaxation of the canal, and the next day the urine began to flow; two thirds of the scrotum sloughed off, the same as in the preceding case.

Mr. Noel observes, that he relates this case merely with the intention of shewing, that in these species of

\* In cases of retention of urine, if the use of all drinks were instantly suppressed, and the patient supported by a few spoonfuls of jelly, lemonade, wine and water, to be taken every half hour, time would be gained for the re-establishment of the course of the urine before the bladder would be filled, and the necessity for the operation by puncture very rarely occur.



retention the perinæum is more or less affected, and that any operation, however trifling, will only tend to augment the mischief. Mr. Noel likewise remarks, that many practitioners concur with him in preferring the hypogastric section, and that others object to it from the idea that the urine would pass through the canula with difficulty, and that in old subjects the bladder would be situated too deep. The two following cases are related with the view of obviating these objections.

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### C A S E    I I I.

**O**N the 20th of May, 1790, Mr. Noel was sent for to a patient 67 years of age, afflicted with retention of urine. Three days before, a surgeon experienced the greatest difficulty in passing the catheter into the bladder. As this instrument, which had been left in the bladder, was extremely inconvenient, it was withdrawn the morning of the day when Mr. Noel was consulted with the intention of passing one of the elastic gum. Before they attempted its introduction they waited until the evening, to see if the urine would pass without the assistance of this instrument; but as all the endeavours of the patient, joined to all the means that were employed, were unattended with

with success, the introduction of the catheter was again attempted, but without success. At this period Mr. Noel was called in, who immediately proposed the puncture as the only means of cure. The bladder was extremely tense; from the violence of the pain, the patient was impatient for the operation. It was immediately performed, in the same manner and with the same facility as in the preceding case; the treatment differed only in this particular, that instead of leaving the canula in during the whole treatment, it was withdrawn at the expiration of twelve days, and one of the elastic gum introduced, without the least difficulty, in its stead. This was changed every ten or twelve days, to prevent obstruction from concretion, &c. During this time Mr. Noel was occupied in the cure of the strictures. At the end of the seventh week the urine passed through the urethra with tolerable freedom; the canula was not again introduced; and five days afterwards, by means of slight and constant compression made by means of a bandage passed round the body, the aperture was closed, and the patient completely cured.



## C A S E IV.

**M.** P. a bookseller, 66 years of age, for a period of twenty years had passed his urine with difficulty. In the year 1773, for the first time he experienced a total suppression, which was removed by bleeding and the warm bath. From this time the urine flowed with difficulty; from the extreme fineness of the stream, it was judged that a considerable obstruction existed. On the 1st of July, 1791, the suppression was renewed. Towards 7 o'clock in the evening M. P. sent for his surgeon, who bled him and ordered the warm bath, with the use of drinks. These means were unattended with success; from the symptoms being considerably aggravated, the surgeon was again sent for in the course of the night: he then attempted to introduce the catheter, but did not succeed. Mr. Noel was sent for. At this time the hypogastric region was extremely tense, accompanied with considerable pain, extending along the course of the ureters and the loins. Mr. Noel made some slight attempts to pass a very small catheter of the elastic gum, but was equally unsuccessful as the other surgeon. It was agreed that he should take his drink by spoonfuls, and try again the effects of the bath; these endeavours did not succeed, and the necessity for the operation by puncture was mutually agreed on; the consent of the patient was obtained, and

and an hour fixed to perform it. When the surgeons arrived, no change or augmentation of the symptoms was remarked ; in consequence the operation was immediately performed in the same manner as described in the preceding observations. In the course of the treatment no circumstance occurred worthy of remark. On the 13th day, instead of the silver canula one was substituted made of the elastic gum, about four inches and a half in length. Every ten or twelve days Mr. Noel observes that he was bold enough to change the catheter, after emptying the bladder ; a practice he did not adopt in the case first related, from the apprehension that the bladder would recede and sink into the pelvis, and that in consequence of this displacement the orifice of the bladder would not correspond with the external opening ; a circumstance which would necessarily have rendered the re-introduction of the canula almost impossible, and besides expose the patient to the danger consequent to a diffusion of the urine. The motive, Mr. Noel continues to remark, that induced him to change the canula in this case, was the considerable quantity of tartarous concretions found on the inside as well as on the surface of the canula introduced in the first case, which was withdrawn at the expiration of six weeks. This circumstance induced him to hazard the changing of the canula in this last case. The facility with which it was done, induced Mr. Noel to conjecture that an adhesion took place between the bladder and the inside of the parietes of the abdomen some days after the operation, and which effectually prevented all danger



of extravasation. The strictures in the urethra were so completely overcome by persisting in the use of bougies, that the patient passed his urine nearly in a full stream. Seven weeks transpired during his cure, two of which only he was necessitated to keep his bed.

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*Case of a Necrosis of the Lower Jaw.*

[By M. DEVERS, Surgeon to the Hôtel Dieu.]

CATHERINE Senigaud, 10 years of age, was attacked in the year 1785 with the confluent small-pox, the cure of which was abandoned totally to nature. At the end of the disease, when desquamation was taking place, a period when the cure was supposed to be perfect, a considerable pain affected the left cheek towards the articulation of the lower jaw; four or five days afterwards the part was tense, hot, swelled, and accompanied with pungent pain. The parents were poor peasants; and from their poverty were compelled to leave it entirely to nature. These symptoms increased; the swelling now extended as far as the commissure of the lips; a considerable abscess formed, which broke of itself. It was situated on the inside of the mouth, towards the extremity of the superior branch of the jaw. The pains  
now

now lessened for some days, but the symptoms were soon after renewed, and the swelling became so considerable that the patient could only swallow even fluids with difficulty. No relief was obtained till a new abscess formed externally, which was opened, and a considerable quantity of fetid sanious matter discharged. The quantity diminished by degrees, and at the end of twenty-six days the opening was completely closed. A short time afterwards a third abscess formed: the inferior dentes molares, affected with caries, separated from the jaw; the external fistulous opening again closed, and broke out again nine different times in the space of two years and a half. The cicatrix at last appeared firm, but the cheek still remained swelled, with a constant oozing of matter in the inside of the mouth. The jaws were separated some lines from each other; they could not be separated or approached but by means of external force, which produced considerable pain; as such, no solid food could possibly be taken.

Such was her situation when she was admitted into the Hôtel Dieu on the 10th of April, 1788. Mr. Default separated the jaws sufficiently to introduce his finger without using any violence; he felt with its extremity a piece of detached bone situated along the branch of the jaw, and engaged in the soft parts only by its extremities. Mr. Default then passed a pair of forceps, and extracted a small portion which broke off; he laid hold of it a second time, and succeeded in the extraction of the whole portion. This fragment



ment comprehended all the branch of the jaw, with its condyle, the coronoid process, and the whole inferior angle. As soon as it was removed, the patient was capable of opening and shutting the mouth, without pain, and was capable of masticating solid food the next day. He left the hospital eight days afterwards without experiencing the slightest inconvenience. The regenerated bone appeared to possess the same solidity as the rest of the jaw, and its motions were equally perfect; it was only remarked that the new formed bone was situated lower and projected more outwards than the other branch of the jaw.

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*Case of a critical Abscess in the Groin, which terminated in Gangrene, and afforded a Discharge to the Fæces.*

[By Mr. VIELLE, formerly Surgeon to the Hôtel Dieu.]

A WOMAN named Villette, 55 years of age, and of a weak constitution, was attacked with a putrid fever in the beginning of November 1789. The disease was treated according to the opinion of an empiric. A critical abscess formed in the right groin, which terminated in gangrene. On the 5th of the following December Mr. Vielle was consulted

sulted for the first time. There was a soft and livid tumor, about the size of the fist, in the center of which was an aperture so extremely small that it scarce admitted the discharge of a small quantity of pus. The pulse was weak and concentrated, and the patient in a state of marasmus. After Mr. Vielle was satisfied from her relations that she had never been afflicted with a hernia, he cautiously enlarged the orifice by cutting on a grooved director. A putrid sanies was discharged, and the wound dressed with lint dipped in brandy as well as the rest of the dressings.

The next and the following days the pledgets were dipped in a decoction of bark and honey, and covered with compresses wet with brandy, as in the preceding evening. One drachm of bark was prescribed to be taken every morning for the eight first days, and a drink of decoction of rice sweetened with syrup of marshmallows. The progress of the gangrene seemed checked from the seventh day after the enlargement of the orifice, and suppuration began to take place. On the 12th the edges of the wound were of a vermillion colour, and the bottom deterged in three days afterwards, except in its middle, where there remained a blackish eschar of the size of the nail, which was detached by the 17th, on which day Mr. Vielle, on removing the pledget which covered the eschar, found it tinged with fæces; he also remarked an opening situated at the crural arch, which admitted the introduction of a large sound in the intestinal tube. From this period the wound was dressed dry and



and covered with compresses dipped in weak lime water. The wound soon filled up, and cicatrization took place from the circumference to the center, which was completed by the 27th. There still remained a fistulous opening, though smaller than before, which gave issue to the fæces. Mr. Vielle placed a cushion on the fistulous orifice, and retained it by the spica bandage for the groin. This was removed every day, and the parts well cleaned; and by means of keeping up this pressure for the space of fifteen days, the fistula was perfectly closed, and a firm cicatrix formed. Two years have transpired since her cure without her experiencing the slightest inconvenience.

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## CONTINUATION OF THE DISEASES OF THE URINARY ORGANS.

### *Retention of Urine from swelling of the Prostrate.*

**T**HE truth of an enlarged prostrate producing retention of urine is proved by daily observation; but independent of this consideration, we have only to consider the connection of the prostrate with the beginning of the urethra, and to recollect that this part of the canal is only of a membranous texture,

ture, and we must conceive that the swelling of this gland can scarce take place without in some degree contracting that part of the urethra which it embraces. The swelling of the prostate may depend on inflammation, abscess, or stones formed in its substance; it may arise from varicous swellings of the vessels which circulate through it; or it may depend on swelling or schirrus induration. Our diagnostic of the retention of urine produced by either of these causes, should be regulated by our knowledge of the symptoms peculiar to each, combined with the general symptoms of retention. When this accident is produced by inflammation of the prostate, the retention is soon produced, and the symptoms rapidly advance. The patient at first experiences a sense of weight and heat in perinæo, and in the anus; he soon complains of a constant pulsatory pain, extending to the neck of the bladder: this pain is augmented on going to stool; he is affected with *tenesmus* and frequent desires to make water, accompanied with a sensation as if the rectum was plugged up with fæces ready to be evacuated; and by passing the finger up the rectum, the projection formed by the prostate may be distinctly felt at the anterior part of the gut.\* In evacuating the urine a considerable

\* J. L. Petit, in his posthumous works, vol. 3, page 27, mentions a new symptom of the swelling of the prostate: he says, "that if the surgeon will inspect the patient at the time of going to stool, he will find the anterior part of the projection formed by the fæces, hollowed in consequence of passing over the prostate in a swelled state pressing against the anterior part of the rectum."



time elapses in passing the first drops; and if increased efforts are made for its expulsion, a new obstacle arises, for the prostate is pushed more and more against the neck of the bladder, closes its aperture, nor can the patient make water till he suspends his efforts. The stream of the urine is small, and the pain in discharging it proportioned to the degree of inflammation affecting the prostate. There is one particular symptom attending this species of retention, which is, that when a bougie or sound is introduced, it easily passes as far as the prostate, where it is stopped, and the contact is attended with extreme pain. These circumstances are accompanied with the general symptoms indicative of inflammation.

This, as well as all kinds of retention produced by swelling of the prostate, or by other obstructions in the urethra, are in general more dangerous in themselves than those which are only occasioned by weakness of the bladder. In these last there is no reason to apprehend that the passage to this viscus will be closed; the urethra being free, its sides are not applied with sufficient closeness to each other to obstruct the flow of urine, which, after distending the bladder, is evacuated by the re-action of this viscus, assisted by the action of the abdominal muscles.

In cases of this description, patients generally live for many years without experiencing any serious accident; but it is very different when they arise from obstructions in the urethra; for independent of the natural resistance of this canal, the accidental obstacles which arise from its contraction occasion a greater degree

degree of resistance than the tunics of the bladder, which burst when distended beyond their tone. In these cases the indication is clear ; for as resolution is the most favorable termination of every species of inflammation, all our endeavours should be directed to this end ; thus bleeding from the arm, leeches to the margin of the anus, warm baths, emollient clysters, and poultices applied to the perinæum, are the different means we should employ. All anti-phlogistic drinks, which are efficacious in all other inflammatory diseases, in these cases are more injurious than useful, for the symptoms are aggravated by accelerating the secretion of urine. Instead of drink, the patient should take some slices of orange, or a few spoonfuls of linseed tea, or of decoction of dog's tooth, &c. but whatever means are employed, they are in general slow in their effect, and the symptoms are too urgent to admit waiting until their natural course is re-established. Sometimes the bladder loses its elasticity from the too violent distension of its fibres. The use of the catheter now becomes necessary ; but from the contraction of that part which passes through the prostrate, the introduction of this instrument becomes difficult and painful. We succeed generally better with a large than a small catheter ; it may be made either of silver or elastic gum. When there is occasion to leave it in the canal, that of the elastic gum should be preferred ; but whatever catheter is employed, it generally passes with ease as far as the prostrate, where it is stopped, not only by the tightness of the canal, but by the alteration in the  
curvature



curvature of this canal ; for the prostrate cannot swell without pushing forward and upward or sideways, that part of the urethra, behind which it is situated ; a consideration which should constantly be kept in view with respect to the length and direction that should be given to the beak of the catheter, which should be longer and more curved ; and in passing it, it should be more raised than in other obstructions of the canal. After being assured as much as possible that the end of the catheter corresponds exactly to the direction of the urethra, and that its obstacle to its entrance into the bladder depended no longer on the tightness of the passage, we have no reason to fear making a false passage by pushing on the instrument, which will certainly dilate the canal through which it passes sooner than deviate into a wrong direction. We must acknowledge, however, that it would be dangerous for the young and unexperienced practitioner to regulate his practice by this rule. To pass the catheter with boldness requires considerable practice, joined to a perfect knowledge of the different curvatures of the passage. With the advantages of this experience, the situation and direction of the beak of the gorget will always be known. If the instrument is forcibly pushed on, at the time the beak is held too low, or inclined on one side, a false passage will inevitably be formed, by tearing the membranous part of the urethra ; an accident highly dangerous, and which cannot fail to increase the inflammation of the prostrate, and render the introduction of the instrument still more difficult ; and under these  
circum-

circumstances the operation of puncturing the bladder above the pubis will expose the patient to less danger. The cases adduced by Mr. Noel serve to prove the advantages of this mode of operating; beside, in cases of inflammation of the prostate, we have particular reason to expect success from the operation by puncture, for as it is the nature of inflammation to terminate soon if resolution takes place, there is not any necessity to leave the canula in the bladder for any considerable time; and the urethra now being free, will admit of the passage of a bougie. We should however remark, that notwithstanding the number of successful cases where puncture has been performed, it is certainly attended with danger, and should never be practised till after repeated and fruitless endeavours to introduce the catheter, and after attempting to procure a flow of urine by leaving a bougie in the passage for several hours; a fortunate event which by this means has been often procured, although the obstacle remained. On these occasions a consultation should always be held; and if the means mentioned above are then unsuccessful, recourse should be had without hesitation to the puncture.

But supposing a catheter can be introduced as far as the neck of the bladder, should it be left in the passage or not after the evacuation of the urine? It is certain that its presence in that portion of the urethra embraced by the prostate can only aggravate the inflammation of that gland; on the other hand we have reason to fear that if it is withdrawn, its re-



introduction will become impossible; under these circumstances it is difficult to apply a general precept.

When inflammation of the prostate does not terminate in resolution, suppuration is the frequent result. This suppuration appears not to attack the body of the gland, but the surrounding cellular texture which connects the lobes which compose it; this appearance has been remarked in many subjects dissected at the Hôtel Dieu. Though we have seen very extensive abscesses in this gland, we have never yet seen an instance where it has been destroyed by the suppurative process: on the contrary we have remarked that it has remained larger than its natural size, and that the cellular texture was moistened with pus. Little sacs or follicles of pus are often found between its lobes; and when the deposit has been considerable they have been generally situated on the outside of the gland, either between it and the bladder or on the side of the rectum.

We know, when retention of urine is kept up by a swelling of the prostate in a state of suppuration, when the symptoms of inflammation exist after the eighth day from the invasion of the disease, and that after increasing in violence till that period, they have appeared to diminish, and once more to augment in force, and when the fever is exacerbated in the evening and preceded by shivering.

These symptoms clearly prove the suppuration of the prostate; but there is no particular sign that decidedly indicates whether the pus is infiltrated in the gland, or an abscess formed: and in this case, the precise

precise place of its situation cannot be ascertained. The prognostic of this disease is not the same in each of these species of suppuration: in general an abscess in the body of the gland is attended with less danger than a general affection of its cellular substance; in this last case a cure is rarely obtained, for the pus being diffused in all points of the gland, cannot make its way externally, nor are the symptoms sufficiently clear to justify an incision of the prostate with the view of facilitating its evacuation, which, though it might favour the exit of the matter near the edges, would contribute little to the discharge of the pus situated at a greater distance. In these cases nature sometimes, though rarely, produces a cure by a re-absorption of the pus: but where the suppuration is situated in the cellular covering of the prostate, or between that gland and the neck of the bladder, it often breaks spontaneously into that viscus or is opened by the beak of the catheter, when the pus will pass through the instrument, and by this means every obstacle will be removed that prevented the detersion and cicatrization of the pouch that contained it. If the matter is seated near the rectum, or in perinæo, and its existence and situation are clear to the touch, a large opening is adviseable to facilitate the cure. In these different cases the indication of cure admits of variation, but in all the use of the catheter is necessary, and sometimes indispensable for the evacuation of the urine; and as it is necessary that it should remain in the bladder, it should be made of the elastic gum in preference to silver. Great cau-



tion should be used in its introduction. When the matter is formed, and the prominent part of the abscess is situated towards the urethra or neck of the bladder, it is often ruptured, on the introduction of the catheter, by the beak of the instrument. We are apprized of this happening by the pus being discharged without any mixture of urine. In this case we should wait till the discharge is ceased, then withdraw the instrument for a few lines to disengage it from this false passage, then elevate the beak and pass it on into the bladder.

When the abscess bursts spontaneously, the pus which is discharged mixes with the urine. Whether the abscess breaks into the urethra or into the bladder, it is convenient to let the catheter remain in the bladder and to persist in its use till the urine ceases to be purulent. In the first case it is necessary, to prevent the urine in its passage through the urethra, coming in contact with the seat of the abscess; in the second case, injections slightly deterfive should be thrown into the bladder twice a day, and repeated frequently. The first quantity that is thrown in should be suffered to pass out immediately: this serves to dilute the pus, and to clean out the bladder and the seat of the abscess. The last quantity injected should be allowed to remain in the cavity, as it tends, by mixing with the urine, to render it less irritating: for this intention barley water is generally employed, assisted with the use of a diuretic tisan. Retention of urine produced by stoney concretions in the prostate, has been noticed by Morgagni: he mentions many cases of this nature

nature that he met with in dissection, and cites a number of similar instances noticed by his predecessors.

These stoney concretions admit of great variety in their number, situation, size, figure, and internal organization. Many stones have been found in the same gland. In some subjects, they were contained in cavities in the form of sinusses hollowed in the prostrate. They have been found at the termination of the vasa deferentia and along the course of those canals.

These stones have been found as small as a millet seed, and sometimes of the size of a large cherry; sometimes round and smooth, and sometimes long and their surface irregular. Some have had the appearance of gravelly earth, and were placed in the middle of the gland; some appeared like inspissated semen, and were found situated in the canals of the vasa deferentia; but the majority of these concretions were of the nature of urinary calculi, and lodged in a kind of sinus as above mentioned: the formation of these calculi lead to a suspicion that a fissure or crevice in the urethra or neck of the bladder has been left, occasioned by abscesses, or by retentions of urine of long standing, where the use of the bougie has been neglected. The urine, in passing over this aperture, becomes diffused in the pouch of the abscess, or insinuates itself into the cellular substance of the prostrate and precipitates these tartarous concretions. These calculous deposits sometimes take place after the lateral operation for the stone, when the external wound is closed previous to



the re-union of the internal wound, from whence results a species of internal fistula; or the urine, in consequence of its remaining and stagnating in the cavity, deposits an earthy matter, which, by the addition of new lamina, is susceptible of considerable increase.

The presence of stones in the prostrate is announced by no particular pathognomonic sign. Retention of urine, and difficulty in the ejaculation of the semen, are only symptoms common to many other affections of the prostrate and urethra. By the introduction of the finger up the rectum, we are enabled to ascertain whether this gland is augmented in size or not; but we obtain no information by these means of the cause or the nature of the enlargement. When the stone in the prostrate presents a bare surface in the urethra, it can be known by the collision that takes place in passing the sound; but its precise situation, whether in the prostrate or bladder, is difficult to determine: for suppose that the passage of the instrument is checked by a projecting portion of the encysted stone in the prostrate, we can with propriety doubt whether this is not a calculus of the bladder engaged in the urethra; and in the case where no impediment arises to the passage of the catheter, and it passes over the point of the exposed stone, there is equal reason to doubt whether the stone is situated near the neck of the bladder or if it is really lodged in the prostrate.

This incertitude however with respect to the diagnostic, does not influence the practice; for wherever the stone may be situated, either in the prostrate bladder,

der, or at its neck, its extraction becomes necessary; and the same operation is applicable in either case. It consists in making an incision in perinæo and in the prostrate, as in the lateral operation: if the calculus is in the bladder, the incision facilitates its extraction; if the extraneous body is encysted in the prostrate, it is more easily disengaged. It is possible indeed that the wound will not exactly correspond to that part of the prostrate which contains the stone; but in this case, after ascertaining its precise situation by introducing the finger into the wound, the surface of the cyst can be incised with the point of the bistoury and the calculus easily extracted.

Another cause of swelling of the prostrate which more frequently occurs, is the varicous enlargement of its vessels, and of those which ramify in the cellular substance that connects the neck of the bladder to the beginning of the urethra. From anatomy we learn that these vessels form a plexus obvious to the eye, without the assistance of injections. This vascular plexus is susceptible of considerable dilatation, and we may often remark a species of knobby projection about the neck of the bladder, similar to varices situated in other different parts of the body. In this disease the body of the prostrate is less enlarged than the cellular substance, &c. which invests it, the texture of which is sometimes soft and spongy, sometimes dense and hard, in proportion to the length of time the complaint has existed: in fact these varicous swellings present the same varieties as hemorrhoidal tumors, to which they are extremely analogous and



with whom they are often complicated. One or both of these diseased alterations are as often the effect as the cause of retention of urine, or of constipation. No circumstance contributes more to produce them than the efforts of patients to urinate or to evacuate their faeces.

Violent contraction of the abdominal muscles, by strongly compressing the viscera contained in the abdominal cavity, will occasion a difficulty in the return of the blood by the iliac and mesenteric vessels, which will produce a distension of the veins in perinaeo and necessarily occasion a swelling of the connecting parts. In this case the varicous swelling of the prostate is consecutive to the retention of urine. A swelling of this gland often precedes retention of urine, of which it is the primary cause. These dispositions frequently happen among old men, or young men who have abused their constitutions by excess in drinking or venereal indulgencies. It also often occurs to those who have had frequent gonorrhæas, or who have been subject to the piles, complicated with abdominal obstructions.

We know when retention of urine is to be attributed to the varicous state of the prostate. First, by the reunion of symptoms common to the swelling of this gland. Secondly, by the slowness with which the retention takes place; generally preceded by a difficulty in making water, which progressively increases every time the patient rides on horseback or in a carriage, and indeed after any kind of exercise or after taking any heating liquors or stimulating food.

Thirdly,

Thirdly, by the indolence or want of sensibility in the tumor, a disposition which may be distinguished by compressing this gland with the finger introduced up the rectum. Fourthly, by the absence of smarting in passing the urine and of other symptoms peculiar to other species of enlargement of the prostate, and by the presence of some of the predisposing causes which have been noticed before. When the urine is completely retained, it is necessary to introduce the catheter; an operation by no means always easy even to the most expert surgeon. The rules and precautions we mentioned when treating of the inflamed prostate, may be here with propriety applied. When the swelling of the gland is varicous, we should be particularly attentive to employ a large sized catheter made of the elastic gum. When an obstruction occurs to the passage of the instrument from a contraction in the canal, instead of withdrawing the catheter with the view of renewing the attempt, it is best for the operator, if he is confident that the beak of his instrument corresponds to the axis of the canal, to push with some force against the obstruction, and to rest it in that position. The pressure of the beak against the internal membrane of the urethra tends to enlarge the passage, and facilitates the introduction of the instrument a second time: by persisting in this plan, sooner or later it can be passed into the bladder. With this indication, bougies made of cat-gut have been employed. When they have been introduced into the passage, they are to be secured in the manner already directed. They swell in consequence of the  
 humidity



humidity of the urethra : they separate and press the sides of the urethra from each other, by which means the passage will admit of a new bougie being passed farther up. Mr. Default, previous to his acquiring that dexterity in distinguishing diseases of the uréthra, (which from long practice he can do with great accuracy,) used successfully to employ the cat-gut bougies, but they are subject to the following inconveniences.

1. Their action is too slow, when the symptoms dependent on retention are urgent.
2. They are too stiff to accommodate themselves to the different curvatures of the urethra, consequently their introduction is attended with pain.
3. They cannot be used twice in succession.
4. It is necessary to withdraw them every time the patient has occasion to make water: a circumstance that renders a considerable consumption of these bougies necessary and requires the constant attention of the surgeon. It happens sometimes that vessels are ruptured on passing the catheter and a flow of blood procured more or less abundant. This accident, instead of being injurious is often useful: it is a topical evacuation, which unloads the vessels and facilitates the passage of the instrument. When this flow of blood does not take place, and when the catheter cannot be passed, leeches have been recommended to be applied to the perinæum as well as bleeding by the arm. These means, though inferior in efficacy to topical bleeding, have been sometimes attended with success. After the evacuation of the urine by means of the catheter, it should be suffered to remain in the bladder; its presence in the  
urethra

urethra becomes necessary to dissipate the swelling of the prostate, as well as of that portion of the urethra which passes through that gland. Its use should be persisted in for a considerable time, and it is proper to withdraw it every eight or ten days and replace it by a fresh one ; by this means we avoid the inconvenience resulting from tartarous incrustations.

A perfect cure cannot be expected in less than six weeks or two months of this treatment, and even then the patient is subject to a relapse. To prevent this from taking place, the use of bougies should be relinquished by degrees, and they should be worn in the night even after the cure has apparently taken place.

When we reflect on the analogy which exists between the varicous swelling of the prostate and varices of the legs, we shall see that the same principles are applicable to the treatment of both : for in the latter affection we find from experience, that compression, long continued and exactly applied, is the only means of cure : catheters act partly on the same principles : this consideration suggested the employ of leaden bougies ; for it was conceived that in consequence of their weight, the compression would be stronger and their effect quicker and more obvious : but these cannot, like the bougies of the elastic gum, afford a passage to the urine ; nor have they sufficient solidity to surmount the obstacles of the urethra ; and though flexible, they are too hard to adapt themselves easily to the curvature of the urethra ; besides there is reason to apprehend, from their too violent compression on some parts of the canal, eschars may be produced



duced which might terminate in gangrene. The success from the use of bougies in these cases is not to be attributed wholly to compression; their residence in the canal, induces a kind of phlogosis in this part and in the prostate which assists the subsidence of the swelling. This slight inflammation that is brought on is soon followed with a discharge of purulent matter, more or less abundant, from whence results an obliteration of the vessels and dilated cells; whilst the catheter, keeping up the dilatation of the passage, (during this effort of nature,) preserves the liberty of the canal. This opinion, the editor remarks, is only conjectural, but that it appears consistent with truth and probability.

The swelling and schirrus induration of the prostate is a disease to which old men and those who have had frequent gonorrhæas are particularly liable. It is not however always produced by venereal virus, but may be affected by tetters, psora, or by a concealed scrophulous disposition. The size and hardness of this gland vary materially in proportion to the time that the swelling has existed. It is often found of a cartilaginous texture, but more frequently of the appearance of hogs skin, and appears filled with a kind of inspissated lymph. Sometimes it is increased to double or even triple its natural size. I. L. Petit says that he has seen it as large as the fist. Sometimes we find the whole gland affected with schirrus, and at others we find it only partially affected with this kind of induration. Our diagnostic of this disease is drawn from the symptoms common to the tumefaction of  
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the prostrate, conjoined with the commemorative, remote, and proximate cause. The hardness of the gland can be discovered by the introduction of the finger up the rectum, which is attended with little pain. When the swelling is not of long standing, and it arises from a venereal cause, our prognostic may be more favourable than when the complaint is complicated with scrophula or any other diseased disposition. When it has once taken on a cartilaginous texture, no hopes can be entertained of a cure.

Retention of urine being a general symptom of a schirrus affection of the prostrate, the introduction of the catheter becomes necessary, and an operation always attended with more difficulty than in any other swellings of the prostrate; for the hardness of the gland prevents it from yielding to compression: catheters of a small diameter succeed better than those of a larger size. It frequently happens that we are obliged to employ some degree of force to separate the sides of the urethra; and the stilet used in the elastic gum catheters not being sufficiently solid, the surgeon is obliged to substitute a silver one, of the same size as those employed for children. It sometimes occurs that notwithstanding the smallness of the instrument, we cannot succeed in passing it without employing a boring motion; but in doing this it is essential to attend strictly to the direction of the canal, which should always correspond to the beak of the instrument. When it is passed into the bladder, it should be secured to two ligatures fastened to the rings at its extremity, then passed under the  
 buttocks,



buttocks to each side of the groin, and there fixed to a bandage. After the catheter has been worn two or three days, it becomes loose in the canal, which will now admit of the introduction of one of the elastic gum, which will be more readily passed with its stilet: it should be secured with cotton ligatures round the glans penis. This should be left in four or five days; at the expiration of which a larger one may be passed; and after the same period has elapsed, it may be again withdrawn, and one still larger employed. This plan may be persisted in for four or five times, till the urethra has attained its natural size. In fact the use of the bougies should not be relinquished till the discharge occasioned by their presence is stopped, and the prostate reduced to its natural size, which generally does not take place till the 30th or 40th day after the treatment, and sometimes not till a later period. In these cases, if there is any prevalent constitutional affection, such as a venereal or scrophulous taint, appropriate remedies should be employed. We shall not at present discuss the subject of bougies used in these complaints, that are supposed to possess a suppurative property, for we are of opinion that they are useless and inefficacious, and at the same time we mean to destine a separate article to the treatment of this subject.

*Cases of Umbilical Herniæ, cured by Ligature.*

[By M. PLAIGNAUD, D.M. Surgeon to the Hôtel Dieu.]

## C A S E I.

**M.** ARNAY, two years of age, had an umbilical hernia two months after his birth, on which uniform compression had been made for six successive months without any advantage being derived. As the tumor progressively increased in size, the child was brought to the Hôtel Dieu on the 23d of January, 1791. The tumor terminated in a point, and was an inch in length from the base to its extremity; the umbilical ring was extremely dilated; the parts admitted of being easily reduced, when they immediately returned into the hernial sac. Mr. De-fault proposed the radical cure by the ligature on the integuments and hernial sac; a method which he has frequently employed, and with the most complete and perfect success. The operation was performed in the following manner: the infant was laid on his back, when the surgeon reduced the contents of the hernia, and by means of pressure with his finger retained them in the abdominal cavity, retracting at the same time a small portion of the skin at the base of the tumor; he raised and supported the umbilicus, whilst  
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an assistant encompassed it by a ligature of waxed thread passed several times round its base, and secured at each by the surgeon's knot. The infant expressed more impatience than pain during the time of the operation. The parts comprised in the ligature were covered with lint and a thick compress secured by a circular bandage sustained superiorly by a scapulary. The child was taken away by the mother, and brought again the next morning; from her account the infant had suffered little, and had enjoyed uninterrupted sleep. Little change was remarked in the colour and size of the tumor. The next day it remained the same. The ligature now being loose, instead of tightening it, which could not have been done without dragging the tumor, it was judged more eligible to apply a fresh one, the application of which was attended with more pain than the first.

On the 4th day, the tumor was black, and began to diminish. By the 8th it fell off. The cries of the patient did not produce a return of the hernia. The ulcer that resulted from the eschar that had been thrown off was about half an inch in diameter; it was dressed simply with dry lint, and cured in less than three weeks. The same bandage was employed as in the first instance, and continued for two months after cicatrization had been completed. This child was frequently brought for examination a long time after the bandage was left off; the spectators were perfectly satisfied that there was no remaining dilatation; the cicatrix was perfectly flat; nor did the cries of the child produce the slightest impulsion.

## C A S E II.

**C**LAUDE Bonnival, nineteen months old, was treated in the same manner for a hernia that had existed from the birth. The tumor fell off by the 9th day; cicatrization of the ulcer was completed seventeen days afterwards, and the patient cured as in the preceding case.

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## C A S E III.

**O**N the 28th of July, 1791, the same operation was performed, with equal success, on a child 11 months old, named Louisa Rogat. The falling of the tumor and the cicatrization of the ulcer took place even sooner than in the preceding observation.

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## C A S E IV.

**A**NN Coutan, 20 months old, had a hernia of a particular form. The tumor was conical, and its apex answered to the umbilical ring. From the



narrowness of the opening, some difficulty occurred in the reduction. This was the only circumstance that afforded any variety either in the treatment or cure.

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C A S E V.

**J** CARTRON, 14 months old, had an umbilical hernia, with the umbilical ring extremely dilated. The hernia protruded near two inches: its base was very large. This infant was cured as in the preceding cases, with the difference only that cicatrization did not take place quite so soon.

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C A S E VI.

**A.** REGLAT, two years of age, had a hernia from his birth, larger in size than the preceding. The ring was more than an inch in diameter; the tumor comprized in the ligature was separated the eighth day; and cicatrization completed by  
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the end of the third week, at the end of which period there was no sensible impulsion nor dilatation whatever.

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### C A S E VII.

**J** BOISELLE, 16 months old, had a hernia similar to the preceding case, except that the dilatation of the ring was in some degree less. When the integuments were put on the stretch, they were sufficiently transparent to admit of the intestine being seen that was contained in the hernial sac. The dressings were taken off by the child on the fourth day after the sloughing off of the ligature, and remained 16 hours without any dressings being applied. This circumstance proved no impediment whatever to the cure.

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### C A S E VIII.

**J** GARDMANN, 19 months old, had the ligature applied on the 23d of July, 1791, and was cured as perfectly as the others, although extremely



enfeebled. Six weeks transpired before the cure was compleated, during which period it was necessary to repeat the frequent application of the lapis infernalis.

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### C A S E IX.

**T**HE same operation was performed on the 6th of June preceding on an infant of the name of Pajot, aged 22 months, who was nearly as weak as the subject of Case the 8th. The belly was hard, large, and the linea alba projected considerably. These unfavourable circumstances did not prevent the success of the operation, but only retarded cicatrization, which was not perfected till the 63d day; but at this period the belly re-assumed its natural form. The patient became fatter and sensibly improved in health and strength. The patient was brought to the hospital several times after his cure, and the surgeons were perfectly satisfied that no trace of the complaint remained.

GENERAL OBSERVATIONS *on the Application of the*  
*Ligature in Cases of Umbilical Herniæ.*

The ligature in umbilical herniæ is not a new operation. Celsus speaks of it as a common practice, generally followed with compleat success; but as confined only to children from seven to fourteen years of age, of good constitutions, and affected only with small herniæ. After the reduction, the skin and hernial sac were wedged in between two pieces of wood, strongly tied at their ends, and retained in this position till by means of compression their organization was destroyed and the parts sloughed off. Another method was, to tie the base of the tumor with a double thread, which was passed through the sac by means of a needle, and by this means half of the tumor was comprized in each portion of the ligature. Some practitioners were cautious, previous to its application, to make an incision through the apex of the tumor into the sac, to ascertain by the finger whether the parts which constituted the hernia were compleatly returned. Others, and Celsus among the number, reject this precaution, and mark with ink the circumference of the basis of the tumor previous to its reduction: they then draw the umbilicus forwards and make a ligature precisely on the line they have traced; the part on the outside of the ligature was then destroyed with the actual cautery or by cau-



ftic, and the wound dressed afterwards as a burn. To prevent the ligature from slipping, Paulus Egineta recommends a circular and superficial incision to be made round the basis of the tumor, and the umbilicus to be raised with a hook, and a thread or a piece of cat-gut to be passed in the incised place and secured by a kind of slip knot. The hernial sac was then directed to be opened, and if the intestine was found entangled, that the ligature should be loosened; if only a piece of omentum, its excision. Independent of this ligature, this author employs one with a double thread passed through the basis of the tumor, in the manner we have just related; and when the ligatures are thrown off, he recommends the wound to be dressed with dry lint, with the intention of rendering the cicatrix more concave and depressed. Avicenna, Albucasis, and other Arabians, have copied Paulus Egineta. Gui de Chauliac, Brunus, and other Arabian authors, who have treated of this operation, also describe it nearly in the same terms: and the first remarks that this method is complicated, requires great address on the part of the operator, and that he had never practised it himself.

Ambrose Paré describes the same operation, but in such a confused manner that it is easy to judge that he had never adopted this method himself or seen it practised by others. One of the commentators on Dalechamp's Surgery remarks, that the methods of Paulus Egineta and other Arabians had been long since abandoned. Thevenin has treated this subject with more clearness than his predecessors: he describes four dif-

different methods of applying the ligature. In cases of exomphalos of considerable size, he passed through the tumor two needles armed with a double thread in the form of a cross, then incised the skin circularly in the same manner as Paulus Egineta, and tightened the four ligatures. In the second method he left the needles in their situation, and embraced the basis of the tumor with one ligature situated between them and the parietes of the abdomen. The other two methods are copied from Celsus. Dionis rejected the ligature of the umbilical tumors, as an operation extremely cruel; but Saviard, his contemporary, gives a more favourable opinion, and which may be more relied on, as he speaks from experience of its effects: he had performed the operation twice with success, before Dionis had published his course of operations. It is true that Saviard had employed neither incisions or futures. The majority of modern practitioners think with Mr. Hevin, that admitting, according to the observations of Saviard, that the ligature may be useful, that it possesses no superior advantage to compression, and that this last method should be invariably preferred. To destroy this prejudice is our motive for mentioning such a variety of cases, which may serve to undeceive practitioners, and convince them of the propriety of the old practice, from which they have deviated without any sufficient reason. A bandage, well constructed, will retain the hernia, and sometimes, after a long space of time, cure it; but even supposing that a cure took place more frequently, it is dearly purchased by the inconveniences atten-



dant on the application of the bandage ; and if by accident it is only once misapplied, every advantage is immediately lost, and very serious consequences are likely to ensue. The ligature is not subject to these inconveniences : its effect is certain and quick, and has invariably succeeded in thirty cases that have been operated on during the space of the last 18 months at the Hôtel Dieu. The cases related at the beginning of this article prove that it will succeed in infants of the most tender age. The ancients employed the ligature with success on subjects bordering on the age of puberty. Perhaps it would succeed with adults. The cases related prove that debility of the constitution, nay even diseases of the abdomen, are not always an obstacle to the success of the operation : it is productive of no inconvenience ; and before it is performed, it is always easy to assure ourselves of the complete reduction of parts, which would be necessarily dangerous to comprehend in the ligature, nor is there any difficulty in retaining the reduced parts during the operation. To the certainty of success, which will not admit of doubt, we have the advantage of the application of the ligature being unattended with pain ; for the infants on whom it has been applied, have enjoyed their rest and appetite, and were completely free from fever. The ligature is then consequently preferable to topical applications, whose inefficacy are known to all practitioners, and is certainly equally superior to compression ; for in this method the skin and the sac are crowded into the umbilical ring, and become a new  
obstacle

obstacle to the contraction and adhesion of its edges. In this way an effect is produced absolutely contrary to the object proposed.

With respect to the certainty of success, and the durability and perfection of the cure, the advantage is entirely in favour of the ligature. The mechanical contraction of the umbilical opening is the same in both methods, or at least we will suppose so, to favour as much as possible the method of compression; but the agglutination and adhesion of parts, the necessary consequence of the inflammation induced, can only be procured by the method we have adopted; considerations that should give it a decided preference to all others; nor will it be disputed but by timid, prejudiced, or obstinate practitioners.

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*Case of Necrosis of the Tibia.*

[By M. DEHANNE, Surgeon to the Hôtel Dieu.]

**M.** BOUDET, a baker, 19 years of age, received a violent contusion on the middle and anterior part of the left leg, which did not however prevent him from attending his business; but from the swelling and pain that supervened, he was compelled



compelled to apply to the Hôtel Dieu, where he was admitted on the 28th of March, 1789, five days after the accident. There was a considerable abscess already formed on the part where the contusion was received, which was opened throughout its whole length. The next day an emollient poultice was applied to the part. On the 11th day the cicatrix was nearly finished, although attention was paid to keep the edges separated by the interposition of lint between its edges. The patient, conceiving himself cured, requested his dismissal. He returned to the hospital in a month, with an erysipelas that occupied the whole leg. By the use of the poultice, suppuration was again produced; but instead of observing rest, and attending to the regimen enjoined, he was intemperate in his conduct, and would not refrain from walking. The tongue became furred, the mouth bitter, and the discharge glairy. The pain and inflammation increased to a violent degree. By the use of emetic drinks these symptoms were, in some measure, mitigated. A severe diet was ordered, but by some means he contrived to evade its observance. The symptoms were now renewed with aggravated violence, and in a few days an ulcer formed on the anterior part of the leg, which denuded the superior half of the tibia: it was dressed with pledgets dipped in vinegar. His drinks were acidulated with cream of tartar. After some days of this treatment, the ulcer began to be deterged, and the suppuration less putrid; poultices were employed, and occasionally dry lint, with the view of repressing the

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the exuberant granulations that rose from the edges of the ulcer.

During the interim of waiting for the exfoliation of the bone, a person, in attempting to raise the patient in his bed, struck the inferior part of the affected leg against the foot of the bed. This accident was accompanied with the most acute pain. The next day an inflammation supervened on the inferior part of the leg, which terminated in an abscess, that was opened as soon as a fluctuation was evident. The whole inferior extremity of the tibia was now denuded. A month afterwards, the dead portion of the bone, that is to say, all the anterior part of the tibia, began to separate from that portion which had not been exposed. From the edges of this portion red granulations began to shoot, which successively ossifying, formed in the end a new bone, which almost covered the dead part of the bone. The exfoliating portion, though detached at its sides, was not moveable; and at this time its extraction was not deemed eligible, as the excessive heat of the weather (being in the month of August) was unfavourable to such a severe operation. For this reason it was deferred till October, till which period he was only allowed decoctions of plants, such as endive, succory, &c. At the beginning of the month a diluting regimen was observed, some slight emetic drinks, and a laxative was ordered.

On the 18th of October, the patient being laid on his back and confined by assistants, Mr. Default exposed all the regenerated portion, by taking away all the soft parts comprized in two incisions, which  
began



began immediately below the anterior tuberosity of the tibia and united at the inferior part of that bone. After securing some small arteries, he raised the ossious portion which invested the sequestered bone by means of a chisel and mallet, and this body, which only slightly adhered towards the middle part, was easily extracted by means of an elevator. The dead portion of bone extracted was nearly of the same length as the tibia and nearly two thirds as thick. A considerable wound resulted from this extraction, the two extremities of which were bounded by the regenerated bone, which Mr. Deault left for fear of interfering with the ligaments of the articulation. The wound was filled with dossils of lint ; and as the new formed bone had not yet attained its perfect solidity, the bandage was employed the same as in fractured legs. The patient was put on diet, and the use of a diluting decoction acidulated with oxymel. The rest of the day and night passed without pain. The third day the dressings were tinged with that kind of bloody oozing which generally precedes suppuration. The superficial lint was removed, fresh applied, and moistened with decoction of marshmallows.

The 4th day the whole of the lint was detached by the suppuration, and exposed a wound of a red and remarkable healthy appearance. The edges of the wound, to prevent the adhesion of the lint, were dressed with slips of linen dipt in cerate and the dressings sprinkled with an emollient decoction. On the 8th day a small splinter of bone was detached, situated at the superior part of the tibia. On the 11th, the  
turgid



turgid appearance of the edges of the wound had entirely subsided, and the bottom began to shoot forth healthy granulations. On the 15th, the patient procured some spirituous liquors and improper food, which brought on symptoms of indigestion. After this excess the wound became pale, the edges swelled, red, painful, and the suppuration ferous and fetid. An emetic was given, dissolved in a considerable quantity of fluid, which procured abundant evacuations and produced sensible good effects. The whole leg was covered with an emollient poultice. In a few days suppuration took place and the wound reassumed its former appearance. On the 60th, the bottom of the wound was nearly on a level with its edges, and appeared disposed to heal perfectly, when the patient, conceiving himself out of danger, gave into fresh excesses, which was followed with new symptoms : in a little time a great part of the cicatrix was destroyed : emetic drinks were again ordered, and continued many successive days. Ptisans acidulated with cream of tartar were used, and emollient cataplasms applied. Some days afterwards the progress of the ulceration seemed bounded, the discharge improved, the bottom of the wound deterged, and the edges thinned : at the end of three weeks no trace remained of the symptoms we have just mentioned. Solid food was now allowed. The bottom of the wound gradually filled up with red, healthy, firm granulations, and the wound was perfectly cicatrized 289 days after the operation, and in 15 months from the first attack of the disease, there only remained



mained a deep groove along the anterior part of the leg which did not affect the solidity of the bone.

This man returned to the Hôtel Dieu fifteen months afterwards, to be treated for a contused wound of the same leg with a division of a branch of the anterior tibial artery, which was secured by ligature. He was cured in the usual time without any accident whatever supervening.

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*Case of an inguinal Hernia, which terminated in Gangrene, and a fistulous Opening, admitting of the Discharge of the Fæces, cured by Compression.*

[By Mr. JULLIEN, Surgeon.]

— **G**AULIAU, a widow of the village of Treilles, fifty years of age, had a hernia for many years situated on her right side, which was easily returned, but she was not solicitous to retain it when reduced. At the end of Nov. 1790, symptoms of strangulation came on, which obliged her to send for a surgeon, who endeavoured to reduce it. Not succeeding, he employed bleeding, baths, anodynes, &c. The symptoms encreased, and the only resource was the operation. The patient refused to submit to it, and preferred the opinion of her neighbours and of an empiric  
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in the neighbourhood. This last persuaded her that the tumor was only an abscess, and left her in a few days in a most desperate situation. The surgeon was again called in, who found the tumor softened, the patient cold, with scarce any pulse, and affected with hiccups and vomitings as frequent as when he first saw her. He proposed the operation, and Mr. Jullien was called in to perform it, the 14th day after the strangulation. On Mr. Jullien's arrival, the vomitings and pains had ceased for six hours; the extremities were cold, the tongue dry, the lips of a violet colour, the pulse intermittent and scarcely to be felt, in short there existed every symptom of approaching death. The tumor was brown, soft, and of considerable bulk; the undulation of a fluid was evident, which was returned into the abdomen by a slight degree of pressure, and was accompanied with a noise.

Under these circumstances, Mr. Jullien declined performing the operation, from an opinion it would be of no avail, but at the same time had some hopes that the case might terminate favourably. Soon afterwards the patient experienced some sensations or motions in the abdomen, which seemed to communicate with the anus. This induced a hope that the strangulation had not completely interrupted the passage between the superior and inferior part of the intestine\* with the view of keeping up her strength, a

\* The inference drawn from this circumstance may possibly lead to an erroneous conclusion, for this impulsion of fæces towards the anus, may take place in a complete hernia,



spoonful of broth, with a little wine, was given every half hour. The next day emollient clysters were thrown up, which at first brought away bilious and then purulent matters; in a few days her strength was a little increased. Six days after the cessation of the symptoms, the tumour broke of itself. The aperture was situated two fingers breadth distant from the superior spine of the ilium. It discharged a considerable quantity of purulent faecal and chyloferous matters mixed with blood. Two hours after this discharge she had two copious stools from the part. A few days afterwards her appetite returned; and from this period it was impossible to persuade her to adhere to the regimen enjoined, or to attend in any degree to the directions of the surgeon. She grew more and more enfeebled every day, and at length fell into a kind of marasmus. The chyloferous matter mixed with excrements and pus, passing constantly through the fistulous opening, determined her to send again for Mr. Jullien, three weeks after he had declined visiting her.

Mr. Jullien conceived that if he could prevent the discharge of faeces &c. by the ring, as he was convinced adhesion had taken place between the circumference of the gut and that part, that the whole of the excrements would pass by the rectum, and that a complete cure of the fistula might by this means be obtained. To accomplish this object, he employed an elastic bandage, the cushion of which was slightly conical, and furnished with a spiral spring, contrived so as to press only on the ingui-  
nal

nal ring, without intercepting the pus discharged from the fistulous opening. This method succeeded, without causing any other inconvenience to the patient than a few colicky pains, which returned nearly every eight days for the first three months: she took off her bandage for an instant, when a quantity of very fluid matter was discharged from the fistula, and the sufferings of the patient instantly ceased. These periodical colicks have not returned since May 1791. The discharge of pus from the fistula gradually diminished; and in June, when Mr. Jullien saw her for the last time, it was quite trifling; her countenance announced the improved state of her health, she soon recovered her strength and employed herself in her usual country occupations. She often left off her bandage without any *facès* passing by the ring. Two months have transpired since which period she has experienced no pain in the abdomen. Mr. Jullien remarks, that from the first existence of the symptoms a small portion of the intestine had been strangulated, which in the sequel was detached by gangrene. He conceives that the edges of the orifice adhered to the ring, and that by the conical cushion of the bandage an effectual opposition was formed to the exit of the matters which passed through the inferior part of the intestinal canal and ceased to communicate with the fistula.



*Case of a schirrus Affection of the Rectum and of the inferior Part of the Colon, that terminated fatally.*

[By Mr. BOULET, Surgeon to the Hôtel Dieu.]

WILLIAM Gatteau, 37 years of age, in the course of the year 1787 experienced considerable difficulty in going to stool; which gradually increased to such a degree, that it required extraordinary efforts to expel the solid fæces. This man had never been affected with the venereal disease or any particular complaint to which this disease might be reasonably attributed. At the time of his admission into the Hôtel Dieu, on the 29th of May 1791, he had been tormented with an obstinate diarrhæa accompanied with tenesmus. There was a constant fetid, sanious discharge, generally black and sometimes bloody, that took place from the anus. The rectum was callous, and filled with tubercles, which rendered the introduction of the finger extremely difficult. These indurations extended themselves to the perinæum and buttocks, where two small abscesses formed that opened into the margin of the anus. In the scrotum there was a number of cutaneous tubercles, similar to those which are observed in cancerous breasts. All the glands of the groin were schirrus, and the greatest part enlarged to the size of the thumb.

A relax-

A relaxing regimen was ordered, with the use of medicines slightly aperient and diaphoretic, a small tent of lint was introduced up the intestine, and an emollient poultice applied. The following days the size and length of the tent were gradually augmented, as the progressive dilatation of the intestine increased. The purging ceased, and the discharge which took place by the anus became white, but was not diminished in quantity. By the 20th day, the inferior part of the gut was sufficiently dilated to admit larger tents. The intestine, above where the tents reached, (which were six inches in length) was supposed to be still contracted from the resistance felt in pushing them forward and from the difficulty the patient still experienced in voiding his excrements. With the view that the tents might be introduced higher and with more ease, they were employed of a smaller diameter. By this method, in less than a week they were introduced ten inches up the gut. It would have been possible to have introduced them still farther, if the contraction had appeared to have existed above\*. The dilatation produced by this mild but continued pressure of an extraneous body on the coats of the intestine soon facilitated the passage and expulsion of the feces, and from this time the state of the patient sensibly improved, his strength increased, and he was capable of enjoying the exercise of walking, which

\* For the description of the manner of applying these tents, the reader is referred to page 255 of the first volume.



he had not attempted since his admittance into the hospital. These favourable circumstances were not however of long continuance: fifteen days afterwards, the deep seated pains in his limbs, which in a slight degree had affected him for many years, suddenly increased, and became more violent in the night than in the day. This last circumstance, which seemed to characterise the venereal virus, induced the surgeon to prescribe a strong decoction of the sudorific woods, in the dose of a pint a day: the effect was slightly sensible. Ten days afterwards a spoonful of Van Swieten's solution\* with each pint of the ptisan was exhibited. The quick disappearance of the symptoms seemed a circumstance highly favourable to the remedy, but his situation in other particulars was not mended, after the use of these medicines had been persisted in for six weeks; on the contrary, the intestine became more painful, the schirrosities which surrounded the margin of the anus, extended more towards the scrotum. The pains in the abdomen, which had never totally ceased, now increased; from this circumstance the solution was omitted. Soon afterwards the suppuration by the rectum was abundant and serous, a colliquative diarrhæa came on, the patient grew more and more enfeebled, and at length sunk under his complaint on the 23d of September, 1791, four months after his

\* This solution is composed of eight grains of sublimate dissolved in a pint of distilled water: sometimes practitioners employ twelve grains, which Van Swieten has done himself.

admission and four years and a half after the first attack of his disease.

On dissection, the diameter of the intestines, were found considerably lessened, particularly from the beginning of the ilium, as low down as the anus; the mesentery was disseminated with schirrus glands, the largest of which was only three lines in diameter; the pancreas was only slightly enlarged, but schirrus throughout its whole extent. The bladder was whole; all the other parts contained in the cavity of the pelvis formed one confused carcinomatous mass, extending to the perinæum and buttocks: its substance resembled bacon both in colour and consistence, and contained small collections of matters similar to what is found in glands ready to ulcerate. The intestine comprized in this mass adhered to the surrounding parts and was confounded with it externally: its internal tunic, healthy in appearance, was flaccid and wrinkled, occasioned without doubt by the disappearance of the tubercles that formerly distended them: it was covered with a sanious matter, which appeared to ooze from its surface. The other tunics were so blended with the cancerous mass, that they could be only distinguished by their colour and hardness, which resembled cartilage. Near the anus they were three lines in thickness, which insensibly diminished till it approached the last vertebræ of the loins, where, the coats of the intestine regained their natural size. The tents reached as high as this part; for the extremity of the one that was last introduced was found situated in this place. The frequent introduction of these



extraneous bodies must necessarily have changed the direction of the superior part of the rectum and the correspondent portion of the colon, for the intestinal canal descended in a right line from the middle of the last lumbar vertebræ as far as the anus.

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*Case of a Ranula, cured by Excision.*

[By M. HENA, Surgeon to the Hôtel Dieu.]

**J**REGLY, 24 years of age, had a tumor from his infancy situated under the tongue on the left side of the frænum; it was small, soft, and nearly indolent; it remained nearly in the same state until the middle of the year 1790, when it grew in a small space of time to a considerable size. Topical applications were only employed, and with no effect. On the 9th of May, 1791, he was admitted into the Hôtel Dieu. This tumor was a ranula, which at this time occupied the whole anterior part of the mouth. As this disease could not be cured without the operation, Mr. Default performed it, and in the following manner. The patient was seated in a high chair, and secured by assistants. The mouth was kept open by means of a substance introduced between the molar

lar

lar teeth. The surgeon then incised with his bistoury the right side of the tumor, the whole length of the frænum. The direction of the incision was from behind forwards. The sides of the cyst were then cautiously raised, and excised with the scissars. The discharge was white grumous, and of an insupportable smell. A slight hemorrhage took place, which was easily stopped by dressing the wound with lint. The day after the operation a considerable swelling took place under the chin and on the edges of the wound. A poultice was ordered, and a gargle composed of barley water and honey of roses. The swelling subsided in a few days, and the sanious and fetid discharge was converted into laudable pus.

On the sixth day, the wound furnished a glairy unwholesome sanies, the skin became hot, the tongue furred, accompanied with a bitter taste in the mouth; circumstances that announced a derangement in the primæ viæ. These symptoms yielded to the emetic drink, and the wound now healed very rapidly. Three days afterwards there only remained an opening necessary for the excretion of the saliva, which was situated at the posterior part of the wound. The patient was dismissed the hospital, perfectly cured, 11 days after the operation.



*Case of a Fracture, with complicated Symptoms, occasioned by a Fall on the Knee.*

[By M. WEDEKIND, Professor at Mayence.]

ON the 24th of November, 1790, a man in running fell on his knee on a heap of hard earth. He got up without any assistance, but was unable to support himself: he was taken home immediately. Considerable swelling supervened on the knee, accompanied with every symptom of violent inflammation. Nitrated drinks, a copious bleeding, and antiphlogistic regimen, were prescribed. The external applications were fomentations, first composed of cold water and brandy, and afterwards of Goulard. The inflammation abated, but the swelling remained. He still experienced the most acute pains, which extended the whole length of the leg, and deprived him completely of sleep. After 11 days attendance, Mr. Wedekind, obliged to go a short journey, ordered that compresses dipped in Arquebuse, should be applied to the limb during his absence. The patient, experiencing violent pain the first time he made use of this application, imputed it to this circumstance, and sent for another surgeon. When he arrived he ordered a poultice to be applied to the leg, composed of aromatic herbs boiled in wine. The pain still increasing, the remedy was rejected,

jected, and the surgeon dismissed. A physician who was consulted the next day, the thirteenth from the accident, found the whole of the leg slightly swelled, without hardness or discoloration of the skin. No acute pain was experienced on pressure, except at the inferior part of the patella, which formed a small projection, above which was an evident depression. This circumstance induced a presumption that this part had been transversely fractured; but subsequent examinations did not tend to confirm the physician in this idea, who contented himself with applying on the whole leg and inferior part of the thigh two long compresses dipped in Goulard water, and retained above by means of a roller. Two days after the pain and swelling diminished, and was in other respects much better; however, from the fulness of the pulse, it was judged expedient to bleed him, and to order a gentle purge, composed of equal parts of cream of tartar and sugar. The pain was now evidently mitigated; and the following night he enjoyed several hours uninterrupted sleep. In the midst of this calm, the swelling of the inferior part of the leg returned with increased violence. Professor Wedekind, who was now returned, continued the same applications; and as the patient was unwilling to keep his bed, he employed a kind of laced boot to contain the leg: it was so constructed as to prevent the flexion of the limb. By means of this contrivance, the patient was capable of sitting in a chair.

On the 17th day, his sleep was not interrupted. On one side the swelling of the knee had increased, although



although the pain in this part had nearly compleatly subsided, and on the other the tumefaction of the leg had sensibly diminished. On the 18th, he was better, and passed the whole morning in his arm chair much at his ease. The physicians, after the usual applications, left him at half past eleven, well satisfied with his position. In half an hour they received the news of his death. They were informed that the patient, soon after they had left him, impatient from the tediousness of the treatment, had sent for a woman, by trade a baker, but who occasionally practised the profession of a bone-setter. This woman took off the dressings, and moved the limb with considerable violence in every possible direction, notwithstanding the dreadful pain that this conduct occasioned; at last she made him support himself entirely on his foot, walk up and down his chamber, and then sit down; during her endeavours to execute new motions with the foot, the patient fell into a syncope and expired. The regency of Mayence, informed of this singular fact, gave orders for the body to be opened, which was done on the 13th of December, 1790, two days after his decease.

A fluctuation was manifest in the articulation of the knee, with an extraordinary mobility of the patella. The incision of the integuments exposed a cellular substance, with lymph diffused in its cells, and with some vestiges of extravasated blood. On dividing the vastus externus muscle, a quantity of brown fluid spouted out mixed with floculi, similar in consistence to fat half melted. On the outside of the

the patella, a vertical fissure was observed, which divided the articulatory capsule throughout its whole upper part. The patella itself was uninjured; its internal surface was only tinged with a yellow colour, which was equally diffused all over the cartilages of the articulation. The capsular ligament was transversely divided for the space of an inch towards the inferior angle of this bone. The articular surface of the tibia presented two deep fissures; one, extending directly from before backwards, separated the two condyles; the other, directed obliquely from behind forwards and outwards, had detached from the body of the bone the posterior part of the external condyle, which was only retained by its adhesion to the fibula. The fragments were not, however, displaced. The void produced by the slight separation of the fractured portions was exactly filled by a red substance, about the thickness of a card, and of a laminous scaly appearance. The other parts of the articulation were uninjured, except the adipose ligament, which appeared violently contused.

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REMARKS *and* CASES *by the* EDITOR.

The case related by Professor Wedekind affords ample room for interesting reflection, as it concerns  
theoretical



theoretical and practical surgery as well as medical jurisprudence. The species of longitudinal fracture which separated the condyles, and penetrated deeply into the body of the tibia; the external condyle detached without displacement; the red laminous substance which filled up the fissure, which without doubt would have been changed into bone; the rupture of the articular capsule, the effect of the fall, or perhaps produced by the violent exertions of the bone-setter; the projecting portion of the inferior part of the patella, and the depression remarked above though the bone was not fractured; the difficulty of discovering the nature of the injury; the symptoms collectively considered, their nature and progress; their cessation, which was nearly total, on the application of an instrument that formed an opposition to the flexion of the leg; the violent pain brought on by motion inconsiderately applied, and the death that it occasioned; are all so many different objects for the reflection of the surgeon. Each might perhaps merit a particular discussion; but this would lead us beyond the bounds we prescribe ourselves in the conduct of this Journal. We shall content ourselves with annexing two cases analogous to that of Professor Wedekind's, which will clearly prove the danger of motion ignorantly and rashly applied to parts already diseased, and the serious symptoms that may result from the displacement of fractured bones.

## C A S E I.

MARY Bardou, 16 years of age, experienced at the close of the year 1786, a violent pain at the superior part of the left arm, which had been fractured ten years before. The practitioner who was first consulted, considered it prudent to attempt nothing at this period. The *Sieur Dumont le Valdajou*, a man much in vogue at this time, was called in : he gave a decided opinion that the bone was luxated ; and after a very forcible extension, he moved the arm repeatedly in every direction with considerable violence. An alarming inflammation from this imprudent conduct, soon occupied the upper half of the arm, which extended to the correspondent portion of the shoulder and thorax. This practitioner, though obliged to acknowledge his mistake, still flattered the parents with the hope of a speedy cure ; he applied a mixture of suet and bran dipped in urine to the parts affected ; the pain became in the highest degree violent ; many abscesses formed in the arm and breast, which broke spontaneously at the end of three months, and remained fistulous. After six months of this disgusting treatment she was abandoned by Dumont, and was obliged to apply for admission into the *Hôtel Dieu*. At this period this unfortunate woman had a deep and extensive caries, affecting the whole superior part of the humerus and which had affected the first three true ribs. From her strength being already exhausted



hausted by her sufferings, and an abundant suppuration accompanied with a purging, the resources of art were ineffectual: she sunk under her disease on the 1st of November, 1789, a little time subsequent to her admission.

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## C A S E II.

[By Mr. GUILIER, Surgeon to the Hôtel Dieu.]

**J** FLIPE, a very strong man, 29 years of age, was carried to the Hôtel Dieu the 15th of October, 1790, for an oblique fracture of the middle part of the thigh complicated with a wound. Independent of this there was a jagged wound situated over the superciliary arch, which affected only the integuments. The accident happened by his falling on the pavement from a second story. He was drunk at the time it occurred. He was senseless, heavy, with a frequent and concentrated pulse. These symptoms, probably in part occasioned by his drunkenness, subsided the next day. The wounds were dressed, and the thigh maintained in an extended position. He experienced only slight pains, which were totally dissipated by the 4th day, when the alimentary canal had

had been evacuated. No swelling whatever of the thigh took place.

By the 7th, the wound was nearly cicatrized, and the patient seemed to be out of danger of any accident; but the following night one of the patients awkwardly endeavouring to raise him in the bed by his middle, displaced the fragments of the bone and bent the thigh. The patient instantly experienced involuntary contractions and twitchings of the parts, which became every instant more violent. The surgeons were not apprized of it till the next day. The muscles contracted with such force, that on taking off the dressings, the thigh bent at a right angle, notwithstanding an extension kept up by two vigorous assistants. These two could not reduce it, and it was necessary to have a third to press on the fractured part. From this time no dressings whatever were adequate to prevent the involuntary motions and contractions of the parts; a difficulty in depressing the lower jaw, almost invincible, announced an attack of tetanos, which soon became universal, notwithstanding the use of Hoffman's anodyne liquor and other antispasmodics, and terminated fatally five days afterwards.

On dissection, the soft parts contiguous to the fracture were found bruised and torn by the friction of the bone and moistened with a considerable quantity of bloody sanies. No extraordinary appearance was found on opening the head, or in any other part of the body.



*Case of a complicated Hare-lip cured by the Operation.*

[By Mr. AGASSE, Surgeon.]

THIS surgeon was consulted in April, 1791, for William Ball, a child seven years of age, who was affected from his birth with a double hare-lip. The middle part of the lip formed a kind of button five lines in diameter, which projected farther than the end of the nose and with which it formed a continuation. This projecting portion of the lip covered in part a detached fragment of the maxillary bones, in which were three incisor teeth. This fragment projected one quarter of an inch. This offious portion admitted of motion from side to side, and closed up the anterior extremity of a fissure nearly an inch in breadth, and which divided the palatine arch throughout its whole length and in which might be seen the inferior edge of the septum nasi. This child was at first nourished with cows milk and afterwards with pap. He was incapable of masticating his food till four years of age : before this period it was necessary to chew the food before it was given him, which he then swallowed with difficulty. Part of this nourishment passed into the posterior nasal fossæ and passed out of the nostrils and the fissures in the jaw. It was necessary to push his head backwards to enable him to swallow any kind of liquid. The secretion from the  
nostrils

nostrils continually flowed into the mouth through the palatine fissure.

Emboldened by the successful termination of Mary Dehagne's case, related in the first volume of the Journal and which was strictly similar, Mr. Agasse was induced to form a more favourable prognostic than his professional brethren who had been previously consulted, and who had unanimously rejected the operation as useless, dangerous, and even impracticable. Mr. Agasse undertook to perform it, but requested that the child should remain at his own house till the completion of the cure. On the 3d of May the compressive bandage was applied, (of which Mr. Desault availed himself in a similar case,) with the view of diminishing the bulk of the projecting portion of the lip and lessening the protrusion of the isolated portion of the maxillary bones. The same success was obtained.

By the 17th day, the inferior edge of the projecting portion of the lip was depressed lower than even the other part of the lip, and was widened in the same proportion. The ossious fragment was pushed in at the same time, and in such a manner, that the end of the nose projected more than a line beyond it. This state appeared favourable to the operation. After detaching with a bistoury as far as the nostrils the projecting lip which adhered to the bony protuberance, he incised its edges, as well as those of the lip, with the scissars, in the manner described in the first volume. As the projecting portion of the maxillary bones was very large, Mr. Agasse had prepared him-



self with two pins, with the intention of passing them superiorly on each side of the projecting portion of the lip; but finding that he could easily pass a gold needle through the edge of the free portion of the lip, he renounced the use of the pins, and preferred to pass another needle only of the same nature as the first through the parts, as near as possible to the nose. In other particulars the same dressing was employed as in the case of Mary Dehanne. The arteries of the projecting portion of the lip afforded at first a considerable hemorrhage. Compression on the trunk of the labial artery, which passes over the maxillary bone, did not suppress it. This circumstance, with the cries of the child, protracted the operation longer than it would otherwise have been from the attendant circumstances. The first day passed extremely well. The patient even slept a little time after the operation. The pulse was raised a little towards the evening. The dressings were renewed the next and the following days. The child, disgusted with broth, wished for solid food; he was indulged with some mashed strawberries; lemonade was his ordinary drink. Three days afterwards, on the re-application of the bandage, a hemorrhage was produced from the cries and agitation of the patient. This was stopped by a uniting bandage, made of a double headed roller, the middle of which was carried on the nape of the neck. This method was preferred for fear of disturbing the points of the needles.

The wound, two days afterwards, was dressed twice every day, in consequence of the disagreeable odour the

the thread had contracted. On the 7th, in the morning, the superior needle was removed, being loose, and in the evening the inferior one. The threads fell off the next day, and exposed the upper and left part of the lip torn as far as the middle part of its projecting portion. The right side was considerably less injured. In other respects the lips were perfectly reunited, the projecting portion was now reduced nearly to its natural level, deglutition was easy, and the secretion from the nose now passed through the nostrils. In the space of four days, the cicatrix of the lacerated parts was far advanced; it was now only dressed with fine lint, retained by a slip of emp. diapalma, retained on in the night by a bandage secured to the two sides of the nightcap. By the 17th day after the operation, the child returned home to her parents perfectly cured and without any deformity. The middle portion of the maxillary bones were much depressed, the nose more raised, and the fissure of the palate sensibly diminished. Six weeks afterwards Mr. Agasse saw the child, and found only a fissure in the arch of the palate, which scarcely admitted the extremity of the little finger. The pronunciation, which before the operation was scarcely intelligible, now became distinct; mastication and deglutition was now also easily performed. The projecting portion of the middle part of the maxillary bones, from their width and convexity, appeared, in Mr. Agasse's opinion, to have caused the laceration of the parts; a circumstance which, he conceives, would have been



avoided by passing two needles, and making two sutures at the superior part, as he first intended.\*

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**OBSERVATIONS** on Retention of Urine, *occasioned by Inflammation of the Urethra.*

**I**T is easy to conceive how inflammation of the urethra produces retention of urine in the bladder. To explain it mechanically, we have only to recollect this pathological chirurgical axiom, viz. that no inflammation can exist without swelling of the part inflamed, and that every tumefaction of the coats of a canal will necessarily occasion a contraction in its diameter. Inflammation of the urethra may be divided into erysipelatous and phlegmonous. The first is rarely followed with complete retention of urine, which is often produced from the last cause. Both one and the other may be produced by the general

\* Independent of the causes mentioned by Mr. Agasse, somewhat may be attributed to the cries of the patient on applying the dressings the third day after the operation, and to the strong compression exercised on the needles by the uniting bandages; and perhaps more of this mischief might have been produced by the needles remaining such a considerable time. In the Hôtel Dieu, it is the practice not to leave them more than three or four days, and it is found that no laceration ever takes place.

causes

causes of inflammation, but they more frequently arise from the particular dispositions of this canal. Thus the immoderate use of beer, the external or internal use of cantharides, absorption of the matter in gonorrhæa, catheterism awkwardly performed, the introduction of bougies medicated with acrid matters, all tend to excite inflammation in this canal; but whatever may be its cause, we can rarely be deceived in our diagnostic; for independent of the general symptoms of inflammation, the patients complain of a sense of burning heat in the urethra, and sometimes a shivering almost insupportable in passing their urine. The penis increases a little in size, and becomes more sensible to the touch. Slight pressure along the course of the urethra is sufficient to excite a lively pain; and sometimes, when phlegmonous inflammation exists, will enable you to discover the swelling formed in the thickness of its tunics. At the same time the stream of urine gradually diminishes, and is soon reduced to the size of a thread, consequently considerable efforts are necessary for the expulsion of the urine, which are sometimes inadequate to the effect. The treatment of this disease is simple; the remedies are anti-phlogistic; tisans softening and diuretic, general and local bleeding by means of leeches to the perinæum, emollient cataplasms to the same part, and to the penis, local baths, either of milk, or a mucilaginous decoction, &c. are generally sufficient to dissipate this inflammation; softening injections have been proposed to be thrown up the urethra; but as they cannot pass up an inflamed and contracted



contracted canal without considerable force being applied, this would necessarily, from its distension and stimulus, augment the inflammation.

The introduction of the catheter being attended with pain, it is never had recourse to but in cases of complete retention; but certainly if this instrument is passed in a skilful manner, less pain is excited than is occasioned by the urine passing over an inflamed surface. As the presence of the catheter in the canal becomes a new cause of inflammation, it should be withdrawn and re-introduced when occasion requires. When the inflammation of the urethra is of a phlegmonous nature, if the swelling should suppurate instead of resolving, and the abscess should break internally, the use of the catheter becomes absolutely indispensable to prevent the urine coming in contact with the cavity that contains the pus, which might produce fistulæ, effusions of urine in the cellular substance, &c. The catheter, under these circumstances, should be left till the pouch of the abscess is perfectly cicatrized. When the inflammation is erysipelatous, there is no danger to apprehend: the cure, in this instance, is quicker, and generally takes place in 5 or 6 days, unless some general affection is prevalent in the habit, as the venereal virus; under these circumstances the treatment will necessarily vary.

## OBSERVATIONS on Gonorrhæa.

**I**N populous cities no disease whatever occurs more frequently than this complaint, and there are few subjects on which more volumes have been written or that have been so much investigated as gonorrhæa, and perhaps no disease is more imperfectly known. We are ignorant of the manner in which it is gained, of the rout the virus takes to affect the urethra, whether it penetrates first into the substance of the gland and then by the way of circulation affects the tunics of the canal, or whether it insinuates directly into the urethra and affects its coats by immediate contact. We do not know if the poison of the virus is the product of fermentation, or depends on the action of the solids. It is demonstrated that the matter which produces the gonorrhæa in some, is of the same nature as that which produces chancres in others, and that this difference of action depends solely on the disposition of the person who contracts the affection: but it has not been yet satisfactorily explained how the matter of a gonorrhæa which is sufficiently active to infect a healthy person by a moment's contact, does not prove a cause for the perpetual existence of this disease to those who have been once affected with it; and why this matter, continually diffused on the glans and prepuce, does not produce chancres, buboes, and other symptoms.



In authors we meet with continual contradictions respecting the seat of this disease : some say it is in the vesiculæ feminales, others in the prostrate gland, some in the bulb of the urethra, and others in Cowper's glands ; however the prevalent opinion among modern practitioners is, that the disease in general only affects the mucous follicles of the urethra, and that in the majority of cases it is confined to the fossa naviculare, and that it rarely extends so high as three or four fingers breadth above this part. This opinion appears to us the most probable, and is confirmed by the observations we have made on persons who have died at different periods of the gonorrhœa. In many of these subjects neither the urethra or the adjacent parts appeared injured ; in others we have remarked a redness and an appearance of phlogosis towards the fossa naviculare ; in all, the urethra seemed to have more than a natural degree of moisture, and by pressing the pores or mucous follicles situated on the internal membrane, a fluid transuded similar in its nature to that found in the canal of the urethra. We have sometimes seen ulcerations on the internal membrane of the urethra, but never a true ulcer, although we have met with cicatrices which seemed to have proved their existence. After these facts, we have no doubt that the matter discharged in the gonorrhœa, instead of pus is only the natural mucus of the urethra altered in quantity and colour from the irritation and inflammation of the urethra. The virus of the gonorrhœa, at the moment it is communicated, excites no symptom whatever. Four or five days generally elapse . before

before the disease is announced by an itching over the whole glans and towards the orifice of the urethra, accompanied with a slight degree of swelling of the lips of the meatus urinarius. Sometimes these symptoms occur earlier: it has been said that they have appeared some hours after the application of the virus. They often come on the 2d or 3d day, but more frequently at the end of eight days. But there are cases on record where the symptoms have been retarded for more than six weeks. In some patients, previous to and during the discharge, this itching, with shivering on making water, are the only attendant symptoms, but in general this is converted into a sharp, pungent pain, situated towards the corona glandis: this pain progressively increases, inflammation comes on, the penis enlarges independent of erection, the glans becomes red and swelled, a sense of tension is felt along the course of the urethra, with an obvious diminution in the stream of urine, which sometimes bifurcates, sometimes is discharged in a spiral form, and at others falls like water from a watering pot. The patients are tormented by frequent desires to make water without the capacity, accompanied at the time with pain and shivering. They experience a sense of lassitude about the pubis, and complain of a disagreeable sensation in the scrotum, testicles, perinæum, anus, and the hips. The inguinal glands are often sympathetically affected and even swell in a small degree, but they never suppurate, a symptom which occurs when the bubo is primitive and arises from the absorption of matter. Erections are very frequent, particu-



particularly during the night, and attended with such violent pain as to prevent sleep. The flow of matter comes on soon after the inflammation; it often even precedes it. The irritation alone of the urethra will excite a secretion sufficiently abundant to produce this flow. Sometimes this secretion does not take place: this happens under two opposite circumstances; when the inflammation is too violent, and when it is too weak. These we term dry gonorrhæas. The heat, pain, swelling, and inflammation go on increasing, and at last remain in the same state for six, eight, or ten days. At length they begin to diminish, the swelling subsides, and the discharge gradually lessens till the cure is completed.

When the inflammation is considerable and extends into the corpus spongiosum, it is incapable of erection with the corpora cavernosa. The penis now becomes bent and affected with acute pain: this symptom is called *chordee*. Under these circumstances, when the penis is erect a laceration often takes place of the vessels of the urethra, and a flow of blood more or less abundant and which always produces ease in consequence of unloading the inflamed vessels. The matter which is discharged from the urethra is not of the same consistence or colour at the different periods of the gonorrhæa: at the beginning it is thicker than towards the end of the complaint, when it becomes more serous. The ordinary changes that take place in the colour are as follows; first greenish, then yellow, afterwards white, and by degrees it attains the natural colour of the mucus.

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These changes in the colour of the discharge may be remarked on the linen, the spots having different degrees of shade. In the middle the matter is thicker and in greater quantity, and the colour deeper, while the circumference is pale where the aqueous part has been deposited. The duration of the discharge has no fixed period. When the gonorrhœa is suddenly suppressed and the swelling of the urethra perfectly subsided, we give it the name of retropulsed gonorrhœa; we call it chronic or habitual when it is not cured in the space of two months. It is impossible to predict what time will transpire before a cure takes place: it will sometimes continue for years or even for the life of the patient. The discharge does not always take place from the urethra: sometimes it originates from the prepuce or glans, and comes from the sebaceous glands situated at this part. This we term the bastard gonorrhœa. It is divided into two species, benign and malignant: the first is occasioned by the virus attacking the corona glandis instead of the inside of the urethra and producing on this part the same effects as on that canal: the second is produced by the salaceous matter becoming acrid from remaining on the part and exciting a stimulus between the prepuce and glans that produce a greater and a more puriform secretion. In no disease we should be more cautious in our prognostic than in gonorrhœa. In the mildest cases we can never venture to fix the period of cure: for whatever may be the attention of the patient or the abilities of the surgeon, his endeavours will be often defeated by the obstinacy of the disease.



disease. We may however venture to hazard some remarks that are founded on practical observation; for example, the more the flow of matter is abundant in the second period of the disease, the more easy the cure is effected and there is no danger of syphilis taking place; at least we have less to apprehend when the discharge has run through its different periods without interruption and has ceased spontaneously, than when it has been frequently suppressed as in repulsed gonorrhœa, or when the discharge has been trifling and has taken place at a late period.

When we compare the different methods of cure recommended by authors, we find nothing but contradictions. Some only adopt the antiphlogistic plan, bleeding their patients frequently, and employing baths, with refreshing drinks, &c. others prescribe a heating regimen from the commencement of the disease, and give balsamics, such as turpentine, balsam of copaiba, &c. in large doses. Some conceive that the gonorrhœa cannot be radically cured without the assistance of mercury; a practice rejected by the majority of practitioners as useless and almost always injurious. There are others who proceed more methodically, and who vary their treatment at the different periods of the disease: during the stages of inflammation and swelling, a cooling plan, with the use of detergents, is recommended, and the cure finished by purgatives and balsamics.

We might fill volumes with formulæ of pills, opiates, and other preparations boasted as infallible in  
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this disease ; nor is there a petty practitioner but what has his particular formula.

The several opposite methods that have been just mentioned, strange as it may appear, have met with nearly equal success. From this circumstance men of the first merit have been induced to leave the cure of this disease entirely to the efforts of nature assisted only by a proper regimen. When the patients are uneasy, and conceive their cure cannot be produced without the use of medicines, bread pills, or some other substance that is nugatory in its effect is exhibited. This practice has at least the advantage of not tormenting the patient by disgusting medicines, and injuring the health in attempting the cure of a disease in itself local and which admits of a natural cure. Some have proposed injections, and have divided them into different orders, as irritating, emollient, astringent, &c. others have proposed the use of bougies, which they have distinguished in the same manner and to which properties have been attributed analogous to those of injection. Without entering into an analysis of the *modus operandi* of these means, we shall only remark that the majority of them in a recent gonorrhœa are attended with danger, they can only tend to interrupt the efforts of nature and alter the course of symptoms whose existence are probably necessary for the cure. We are then of opinion that we should not have recourse to any of these methods, unless particular symptoms strongly indicate their necessity : thus we have sometimes successfully employed an elastic gum catheter, which has been allowed to remain in the bladder,



bladder, in cases where great difficulty has been experienced in passing the urine and attended with insupportable pain.

In this manner the use of this instrument has been often attended with success in re-procuring the flow of matter in retropulsed gonorrhæa : but excepting in these extraordinary cases, we for the most part abandon the cure to nature, prescribing only rest with a temperate regimen. Whatever remedies may be employed, either external or internal, the cure is always doubtful until completed. Chronic and habitual gonorrhæas often occur in those cases that in the first instance announce a speedy cure. Under these circumstances the most experienced practitioner is often at a loss, for he is rarely acquainted with the cause of these obstinate discharges, and consequently has no indication to fulfil. No remedies suggest themselves on whose efficacy he can depend, nor is it possible for him to fix a period to the complaint. In this uncertainty what is to be done ? If the practitioner is influenced by conscientious principles, instead of acting blindly and in the dark, he will abstain from ordering any medicine, and suffer the disease to wear out of itself and die as it were of old age. It is better to acknowledge the insufficiency of the art than to suffer our patients to become the victims of ignorance. The causes of the discharge in gonorrhæas of long standing are not all equally obscure ; their obstinacy may often depend on improper regimen, on a bad constitution, on climate, on acrimony or a depraved state of the secretions : it may be kept up by lymphatic swellings  
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in the cellular substance of the urethra, by ulcers in the canal, by a general venereal infection, and sometimes by a defect in the treatment. The slightest change in the regimen produces a manifest change in the quality as well as in the quantity of the discharge; for by renewing or augmenting the inflammation, the matter is encreased in quantity and virulence, consequently more calculated to keep up that mode of action necessary to constitute gonorrhœa: it is thus that exercise on horseback, dancing, spirituous liquors, high, stimulating food, immoderate venery, &c. are causes that tend to prolong the duration of the discharge. Persons of a phlegmatic temperament, of a scrophulous habit, and those in the decline of life, as being little susceptible of true inflammation, are peculiarly subject to chronic gonorrhœa: the vital action, in these cases too weak to attenuate and alter the vitiated secretions, only furnishes a serous matter and in a small quantity, and produces little or no inflammation or swelling. Under these circumstances we have an obvious indication to employ tonics and irritants, such as sudorifics, mineral waters, balsamics, bark, electricity, &c. It should be remarked that in these cases topical irritants have been peculiarly successful: injections with fixed mineral alkali, in the proportion of two drachms to a pint of distilled water, have frequently cured a gonorrhœa in eight or ten days, that has lasted for many months. A solution of two grains of cor. sub. in eight ounces of distilled or rose water or in a mucilaginous decoction, has also often succeeded. Many authors have recommended the



the aqua phagedenica, diluted with a strong decoction of marshmallow water. This last has produced cures under our own immediate observation that have baffled every other endeavour.

Bougies, whatever may be their composition, should all be viewed as topical irritants. Their presence produces a sort of increased action in the urethra and a more or less degree of swelling. Catheters made of the elastic gum produce nearly the same effect without being subject to the same inconveniences; but however either of them may be employed, and worn constantly for a fortnight or three weeks; at the end of which period they should not be suddenly relinquished, but continued to be worn a few hours in the day or night, until the discharge is nearly stopped. If the gonorrhœa resists these means, and its obstinacy arises from the habit of diseased action, or from laxity of the vessels, astringent injections may be had recourse to, such as solutions of alum, blue, white, or green vitriol, rabel water, &c. decoction of oak and Peruvian bark: preparations for this purpose may be used composed of astringent, resinous gums, such as dragon's blood, balsams, turpentine, &c. We should observe, that though injections of this nature possess nearly the same properties, it often happens one will succeed in a particular case after the rest have failed, and yet the same injection will not be equally efficacious with another patient. There are many instances of obstinate gonorrhœas kept up by the existence of some disease influencing the constitution at the time, such as rheu-

rheumatism, dartsous affections, &c. This last has great affinity with the gonorrhæal virus and always renders the running obstinate. When patients have been primarily affected with these complaints, we should always suspect the symptoms to be complicated; but we are more perfectly confirmed in the idea of a general disease existing in the habit, when the symptoms subside on the appearance and progress of the running. In this case the indication is clear. We should attempt the cure of the general disease by appropriate remedies, or divert it from the urethra to some other part. It is to this species of revulsion we may attribute the cures produced by the application of a blister to the perinæum, to the groins, and to the internal surface of the prepuce. On the same principle cures have been obtained of very obstinate runnings by a blister, or an issue on the arm or thigh, which have defeated all other means. One of the most frequent causes of the obstinacy of this complaint may be attributed to indurations or knobs in the urethra. They are generally situated in its spongy texture. They are sometimes single, sometimes in groups, and sometimes collected together like a string of beads. When the penis is in a state of demi-erection these may be distinctly felt. These little knots are so many lymphatic swellings, which keep up a sort of phlogosis in the urethra, favourable to the existence of the running. This discharge sometimes stops and the indurations remain. The patient under these circumstances thinks himself cured, but sooner or later obstructions of the urethra appear with new urinary



tumors. Alkaline injections, local baths and fomentations, will generally discuss them. They rarely resist the use of bougies or those of the elastic gum. The radical cure of the gonorrhæa is consequent to their disappearance.

Gonorrhæas complicated with ulcers in the canal are not admitted by all practitioners : a great number deny their existence : but we are disposed to believe that they sometimes occur, as they only support their opinion on negative proofs, and as the organization of the urethra is by no means contrary to the formation of these ulcers ; and at the same time we are supported in our opinion by those on whose fidelity we can depend and who say that they have actually seen them. Besides, as has been mentioned, we have seen cicatrices in the urethra, nor can we conceive why this part is not equally subject to ulcerate as the glans, the prepuce, the inside of the mouth, &c. There is in fact reason to wonder why these ulcers do not occur more frequently. Though simple gonorrhæas, properly treated, never terminate in syphilis, it is not the same with those complicated with ulcers : these, continually bathed with gonorrhæal matter, take on the character of chancres, and like them will produce a general infection. In these cases general anti-venereal medicines should be used and the local disease cured at the same time. Perhaps these ulcers would cure themselves without general treatment, as is the case sometimes with chancres on the penis. If their edges are hard and callous, the elastic bougies may be employed with success. These are the cases where  
medicated

medicated bougies have been recommended. After a gonorrhæa has existed for many months, it is impossible to say whether it is venereal, or kept by any general affection, or only local. All that has been written on the subject has only increased the difficulty of the diagnostic. Anti-venereals having succeeded in some cases where local ones have failed, it has been supposed that the obstinacy of the running might be attributed to the venereal infection, but we well know how these conclusions are subject to error.

Is it by any means certain that the cure would not have naturally taken place during the time the treatment lasted, or that the remedies have acted as anti-venereal? Perhaps it may be sufficient to change the present disposition of the patient to obtain a cure. The stopping of the running is not always a certain sign of the radical cure of an obstinate gonorrhæa: it frequently happens that after an interruption of a fortnight, one, two, or even six months, this discharge is renewed. When it ceases again, and appears after a certain period of time, the disease cannot be regarded as completely and perfectly cured, although the running has disappeared without return. When the stream of urine is evidently diminished, new obstructions take place sooner or later in the urethra, prove an impediment to its evacuation, and produce in the end retention. Daily experience confirms the truth of this remark, for the greatest part of cases of obstructions in the urethra are the result of obstinate gonorrhæas.



## CASES and REFLECTIONS on Wounds of the Tendons.

[By Mr. THIEBAULT, Surgeon.]

## C A S E I.

VALENTINE Viry applied to Mr. Thiebault to be dressed for a wound situated obliquely on the back of the left hand, occupying all the space comprized between the base of the phalange of the middle finger and the base of the first of the thumb (counting three phalanges to the thumb.) This wound had penetrated into the palm of the hand, and had divided it for the space of an inch. It was occasioned by the stroke of an hatchet, which had cut through the whole of the extensor tendon of the index finger, the body of the first metacarpal bone, half of the extensor medius, as well as part of the two flexors of the index finger. After the parts were cleaned and the hemorrhage stopt, the divided parts were brought in as exact apposition as possible, and the edges preserved in this situation by some slips of gummed taffeta and the whole covered with a pledget of dry lint. The hand was covered with compresses dipt in a simple fomentation of brandy and water, and placed flat on a sort of splint guarded with linen of sufficient length to occupy two thirds of the inferior part of the fore-arm: this was sustained by a bandage in

in such a way as totally to prevent the flexion of the fingers and of the wrist. The arm was supported in a sling, and the patient strongly recommended to avoid every species of muscular exercise. Two days afterwards the dressings were attentively removed, when circumstances had a favourable appearance. The patient had only experienced some slight pains, the hand was swelled without inflammation. As there appeared a disposition to suppuration, a little of the linimentum arcaeï was employed with the dressings. The wound was not perfectly healed at the end of six weeks. The motions of the index finger, at first very confined, were soon acquired by the assistance of emollients, but particularly by exercise. Flexion was attended with some little difficulty, but extension was performed with its accustomed force, when the finger had been completely bent by the assistance of the other fingers, a method which the patient frequently employed.

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## C A S E II.

**T**HOMAS Hergell, 14 years of age, sent for Mr. Thiebault on the the 24th of March, 1791, for a wound two inches in length, made by the same instrument, and situated transversely on the middle part

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of



of the back of the left hand, comprehending the entire section of the extensor tendon of the index finger and of more than two thirds of the tendon of the middle. The patient had the power of extending and bending the three last fingers without pain, but Mr. Thiebault remarked that what remained of the extensor medius seemed ready to break in the motions of extension. The extremities of the divided tendons were brought in contact, and the lips of the wound united and the same dressings employed as in the preceding case. The wound was cured in 10 days and the motions completely established. The dressings were kept on till the 18th day.

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#### REFLECTIONS.

Bienaise, Lamotte, Cowper, Kifner, Molinelli, &c. have not been afraid to recommend sutures in wounds of the tendons. They have obtained by these means and without accidents the re-union of the tendo-Achillis. Haller, Castell, Zimmerman, Tarjon, &c. have pinched, irritated, pierced, and partly divided the tendons of different animals and even of men without occasioning the least pain. But however many modern authors view an incomplete division of these parts as a very serious disease, always accompanied

nied with very dreadful symptoms and sometimes as terminating in death. This is also the opinion of authors well known to students in surgery,\* as well as that of many excellent practitioners, who teach the same doctrine to their pupils; but still while we do justice to their merits, we may be doubtless admitted to adopt a contrary opinion, particularly when founded on experience and observation. In the two cases just related, the patients suffered no more pain than generally accompanies simple wounds, nor did any accident whatever occur during the cure. Are we not justified in believing, after these facts, that the alarming symptoms which have so frequently taken place in wounds of this description, have arisen from an injury to some contiguous nerve? In truth we have seen these symptoms disappear on dividing the tendon completely; but has this method always succeeded? and where the success has been clear and obvious are we sure that nothing but the tendon was divided? However after all that has been said, after considering the cases just related, with many similar ones collected by the best practitioners, we may conclude that wounds of the tendons do not produce those symptoms which have been said to accompany them.

\* La Faye. *Principes de Chirurgie*, p. 307 and 306. *Path. d'Hevin*. p. 550 and 555. *Dict. de Chir. de M. Sue*, p. 619.



REMARKS *by the Editor.*

Independent of the injury to the nervous fibrillæ, which in many cases of wounded tendons appear to have produced a train of dangerous symptoms, the dressings employed, the contractions of the muscles, and the motions of the wounded part, may also occasion accidents more or less dangerous in their events. But there is another cause, less generally known, although common to all wounds, which (particularly in hospitals,) is productive of great mischief; this is a diseased state of the primæ viæ, which may arise from the state of the atmosphere, from fear, pain, &c. A case which lately occurred under our own observation will serve to explain this idea, and tend at the same time to confirm the consequences inferred by that experienced practitioner Mr. Thiebault,

## C A S E.

PIERRE Godailleau, a carman, 50 years of age, was thrown down and bit by a vicious horse on the 20th of July, 1791. A large deep wound was inflicted on the back of the hand by one jaw; its direction

tion was oblique from without inwards. The skin was lacerated, all the extensor tendons injured, and most of them divided. The capsular and other ligaments which connect the bones of the carpus with the forearm, were in part lacerated and many of the bones fractured. The other jaw produced two wounds less considerable in size, one of which penetrated into the articulations of the last phalanges of the third and fourth fingers, interesting at the same time the correspondent metacarpal bones; the other wound divided the integuments and the extensor tendon over the articulation of the first phalange of the ring finger. The patient, independent of this, was contused in different parts of his body and had received a wound on the chest, a little above the right nipple, four inches in extent.

This man was admitted the same day into the Hôtel Dieu. At this time he had fever, accompanied with a kind of delirium, occasioned probably by fright. The symptoms increased so rapidly that it was necessary to bleed him in the evening, although he had suffered a considerable hemorrhage. The wounds were washed and covered with soft lint moistened with aq. veg. and a poultice made with the same was applied over the whole hand and forearm, which was now affected with swelling: the wounded extremity was placed on a pillow properly disposed. The wound on the chest was dressed twice a day, and the patient supported by a relaxing drink acidulated with oxymel. The heat was considerable, the tongue yellow and furred, accompanied with nausea and bitterness



bitterness in the mouth; circumstances that proved an affection of the primæ viæ. The wounds remained dry, their edges red, hard, and painful. An erysipelatous inflammation was remarked on the hand, and extended rapidly as high as the shoulder, and the limb in less than 24 hours increased to double its size. The pains became then insupportable. These symptoms, evidently occasioned by a bilious disposition, indicated the use of emetic drinks, the effect of which is nearly certain in similar cases. They were however employed three successive days before the disease seemed checked. The same remedy exhibited on the fourth, produced a disposition to sleep, for immediately after its operation he slept for some hours. From this time suppuration was established and was soon very abundant; the swelling and the pain diminished at the same time; the appetite returned. Two plates of soup were allowed him every day; but by some means he contrived to procure other food and in considerable quantity. He had soon reason to repent this conduct: for the symptoms all returned on the thirteenth day; the arm became swelled, the suppuration glairy and fetid, the edges hard, turned back and acutely sensible, the wound on the chest now inflamed to such a degree that its edges appeared gangrenous, and from the state of the hand gangrene was also apprehended. A grain of emetic tartar in a pint of drink was under these circumstances an efficacious remedy; the evacuations which it procured were assisted by two drachms of cream of tartar given every morning. The symptoms soon

totally

totally ceased. The same dressings were continued for the hand. The wound in the chest was dressed with the styrax ointment till the eschars sloughed off, which happened on the 20th day. The suppuration from the wounds in the hand being extremely abundant, the patient was dressed more frequently, and particular attention paid to prevent the pus collecting. On giving a slight degree of motion to the hand, a crepitation was perceived produced by the friction of the articular surfaces of the bones of the carpus with the inferior part of the bones of the fore-arm, which were denuded. The tendons began to exfoliate, and on the 30th day the wounds were filled up by a vascular substance softer and of a paler nature than what is observed in ordinary wounds. On the 34th day the pus which had remained in the articulation of the wrist had destroyed the ligament which unites the inferior part of the ulna to the radius, and had now formed a small abscess between these bones which was opened by incision.

On the 36th day the swelling of the fore-arm had subsided and the arm had regained its natural size. The exuberant granulations arising from the wounds were repressed by the application of dry lint; the swelling, &c. of the hand disappeared; and cicatrization was completed at the end of 80 days. The wounds of the two last fingers suppurated for a longer time, particularly the ring-finger. The wound on the chest was healed some days before, and indeed would have healed sooner but for an abscess that had  
formed



formed on the superior part of the sternum and which had emptied itself into the wound.

The motions of pronation and supination of the wrist and fingers were preserved as well as flexion and extension. The ring finger only remained rigid when the patient left the hospital, which was on the 7th of November, 1791. This man in other respects is extremely well, and to all appearance, with time and exercise, he will recover perfectly the use of all the parts injured by the accident. The injury of the tendons, though serious in this case, did not occasion the symptoms that supervened, as they appeared and ceased at two different intervals on the chest as well as the hand, and certainly arose from the diseased state of the *primæ viæ*. This fact is then a new proof that the ancients were erroneous in their ideas of the consequences of injuries to the tendons.

This case serves also to support the facts mentioned in the first volume, and tends additionally to prove that the dangers attendant on penetrating wounds in the articulation have been exaggerated. It is thus that false theories, having for a long time misled the practitioner, are gradually rectified by observations drawn from matter of fact.

*Case of Ulcers of the Face, Affections of the Periosteum,  
with Contraction of the Rectum from a Venereal Cause.*

[By Mr. BOULET, Surgeon to the Hôtel Dieu.]

MARGARET P—, in the year 1782, when she was 30 years of age, was affected with fissures and condylomatous affections of the anus, with nodes of the periosteum on the middle part of the sternum and on the acromion of the right side, consequent to a venereal complaint. By means of bathing repeated twelve times, and mercurial frictions, with an abundant salivation, these symptoms gave way. The condyloma were treated by excision.

This woman experienced nothing extraordinary till the end of August, 1788, when a swelling took place towards the angle of the jaw, and another on the anterior part of the left parotid gland, which soon inflamed and became extremely painful. Towards the middle of the following September a very painful node appeared in the periosteum of the right hand. Soon after the internal condyles of the femur and of the left humerus were affected in the like manner. The sternum and the acromion of the right side became also extremely painful. These symptoms went on increasing till the end of October, when the patient was admitted into the Hôtel Dieu. She was far from supposing her complaints were venereal, as the man with



with whom she lived did not appear to her as if infected, but only affected with rheumatic pains. This woman was sent to a ward destined to the treatment of internal diseases. She here made use of the bath. The swellings in the face, which had been dressed with soap plaister, now began to ulcerate. On this account she was transferred to the surgeon's ward. The ulcer situated behind the angle of the jaw, had laid bare the subjacent gland. It was circular, and about one inch in diameter. Its edges were callous, dentated, of a reddish brown, and detached from the cellular substance. The surface of the gland deeply hollowed, presented to the view a blackish thick eschar. The ulcer situated on the parotid was less extensive, but possessed the same characters. The skin round both the ulcers, for an inch in diameter, was of a deep red colour.

These ulcers furnished an abundant and fetid sanies, which corroded the skin of the neck if left on the part for an instant. The node on the right hand occupied two thirds of the inferior part of the third bone of the metacarpus, forming a projection of a quarter of an inch. It extended also towards the collateral bones and presented the motion of the middle as well as impeded that of the index and ring finger. The skin that covered it was of a reddish brown, and was exceeding hot. The tumors were of the same nature. Emollient cataphlasms were applied to the ulcers. The patient was put on a moderate diet with the use of a sudorific decoction, to each pint of which six grains of mineral alkali were added.

On

On the 3d day after this treatment the inflammation and pain had diminished; the discharge was abundant, but not equally corrosive, and attended with less smell. The eschar sloughed off on the 6th day, and left a very deep ulcer; at the same time some small eschars were detached from the ulcer situated on the parotid. The following days some slight frictions of mercurial pomatum were employed round the ulcers; the proportion was one part of pomatum to three of cerate; but from the inflammation increasing on the fourth application, their farther use was omitted. On the 9th day, 8 grains of mineral alkali were added to each pint of drink. Slight frictions were employed every day to the nodes with the double mercurial pomatum. One drachm of the same pomatum was rubbed into each leg alternately every third day. By the 21st, the pains in the sternum and in the acromion had entirely subsided; the mineral alkali however in the dose of 10 grains was taken every day. By the 31st, the size of the ulcers were diminished one half. At this time the frictions had been employed ten times; and as the mouth had now begun to be sensibly affected with apthæ, the use of the mercurial pomatum was suspended, and only 6 grains of the mineral alkali taken. On the 22d day, the patient was purged with manna. On the 26th, the apthæ in the mouth had disappeared, the ulcer at the angle of the jaw cicatrized, and the tumor of the hand diminished to one half. Little swelling remained at the condyle of the femur, and that of the humerus had totally disappeared.



disappeared. This day the friction was again employed for the 11th time; one drachm was only used. The slight frictions were again employed on the nodes. The patient complained of great difficulty in going to stool, an inconvenience which she had experienced for two years, when the excrements were hard though in a small degree. Since this period she had an abundant purulent discharge from, and smartings at the circumference of the anus. There were external hemorrhoids, with ulcerations in the folds of the intestine; and by the introduction of the finger a considerable contraction was felt, accompanied with callosities extending three inches above the margin of the anus. Three small tents, made of lint, dipped in cerate, were with difficulty introduced, but without much pain: their size were gradually increased. On the 48th, a sixth part of mercurial pomatum was added to the cerate in which the tents were dipped: they now passed with sufficient ease, although they were of the size of three fingers. The second ulcer was then cicatrized, and the tumors entirely disappeared. The patient left the hospital, after using 14 frictions of a drachm each, and on the 52d day of her treatment.

This woman was recommended to persist in the use of the tents, a precaution which she neglected, and the contraction of the intestine re-appeared at the end of four months. It again yielded to the lint tents, which she introduced herself. The venereal symptoms not having since appeared, is a favourable presumption that the cure was completely perfected.

*Case of a Fungus of the Maxillary Sinus, left to itself, the Ravages of this Disease, the Death of the Patient, and the Appearances on Dissection.*

[By Mr. J. J. HERNU, Surgeon to the Hôtel Dieu.]

**M.** T. David, 50 years of age, experienced for two years a degree of violent pain, which she referred to the two large molar teeth of the right side of the upper jaw. These teeth were extracted in the month of September, 1790, without any ease being obtained. Towards the end of February, 1791, the cheek of the same side was affected with swelling and pain. A short time afterwards, a soft small eminence appeared above the tuberosity of the os mali, which rapidly increased, and determined the patient to apply for admittance to the Hôtel Dieu on the 30th of the following April. At this period, the whole cheek was swelled, red, and painful, the tumor on the malar bone was about two inches in diameter, and by projecting in the orbit pushed the globe of the eye upwards and backwards; a portion of the fungus filled up the right nostril, pushed the septum nasi on one side, and passed out for half an inch by the anterior opening; that part of the alveolar process, from which the teeth had been extracted, being depressed below the level of the teeth that remained, rendered mastication extremely difficult. From the



weakness and advanced age of the patient, little hopes were entertained of a cure. With a view of easing the pain in the cheek, compresses moistened with aq. veg. min. were applied.

In the course of the first fortnight the tumor of the os mali augmented but in a small degree, but the fungus increased very rapidly: it extended towards the posterior nostrils, depressed the palatine arch, and deformed the nose so much that it could scarce be distinguished from the cheek, the pains became more and more aggravated, and in the end deprived the patient of sleep. Towards the end of the first month, that portion of the fungus which passed out of the right nostril returned into the nose; the tumor which projected in the mouth in part disappeared, but that, on the tuberosity of the os mali, considerably increased; the globe of the eye was soon entirely concealed in the orbit, the skin of the cheek gradually grew thin, and at last formed a small opening, situated under the great angle of the orbit; from this orifice a great quantity of reddish sanies was discharged. A fortnight afterwards an ulceration was formed at the top of this tumor, which discharged a putrid and corrosive sanies. The pains were now extended towards the ear, from which flowed a quantity of fetid blackish pus. The ulcer became deeply hollowed in the cheek, which in less than ten days was entirely destroyed. A colliquative diarrhæa now supervened, and the patient died in a state of marasmus on the 4th of July, ten weeks after her admission, and three years from the commencement of her complaint. On  
dissection

dissection the muscles of the right side of the face were reduced to a thick yellow cellular substance. The pterigoid muscles, the masseter, and temporal, were in part destroyed by the corrosive action of the sanious discharge, which even made an impression on the finger; the ligaments which connected the lower jaw to the temporal bone were destroyed, and the pus communicated from this articulation with the meatus auditorius externus. The right portion of the palatine arch, and three fourths of the posterior alveolar process were of the consistence of cartilage; the external part of the orbit was destroyed by the fungus; the apophysis of the maxillary bone was disarticulated, and in part destroyed; the articulation of the os mali with the temporal bone was destroyed, and was only connected by thin lamina, in which were several openings; the right partition of the nasal fossæ was destroyed, and the maxillary sinus formed with the nose one large vast cavity.



REFLECTIONS on Retention of Urine, when Catheterism is impracticable.

[By F. I. HOIN, Surgeon at Dijon.]

MR. Hoin begins by observing, that it was with peculiar pleasure he perused the observations and reflections published by Mr. Noel in the Chirurgical Journal on the subject of puncturing the bladder; and at the same time remarks that this practice is sanctioned by the celebrated editor of the same work: he observes that the following reflections are an extract from a paper written on the subject, which was read at a public meeting of the academy of Dijon.

When a patient is incapable of discharging his urine from the bladder, and the catheter cannot be introduced from obstacles that oppose its passage, we should quickly have recourse to artificial means to procure its evacuation, if we are desirous to preserve the life of our patient. The means employed are two; one is termed the operation of *boutonniere* (an incision in the shape of a button hole), and the other is called paracentesis or puncture of the bladder, because it is immediately into this viscus that the trocar is plunged. This is done in three different ways; 1. in the anterior part of the bladder, above the pubis; 2. in its inferior and lateral part, which Foubert divides

divides in the lateral operation; 3. by the introduction of a trocar up the rectum, and plunging it into the posterior part of the bladder.

When considering the advantages and disadvantages attendant on the first of these methods, we must attend to the part where the *boutonniere* is practised, the manner in which it is performed, and the necessity for the operation. The part where it is performed is the same as that where the operation for lithotomy was done by the apparatus major, with this difference, according to Tolet,\* that the incision is less in length, nor is it quite so low down: thus the opening of the urethra is made in the aponeurotic part above the bulb. The manner of doing it, is after you have introduced the catheter as far as the obstacle, (if it exists in this canal), an incision should be made on this instrument by means of an ordinary bistoury; a conductor is then to be passed into this aperture, afterwards a gorget, and then a canula into the bladder, taking care to remove the obstacle without using too much violence. If the introduction of this canula becomes either painful or difficult, Mr. Leger† recommends it to be deferred till suppuration has relaxed the parts: by this means when the vessels are unloaded, they more readily give way to the dilatation produced by the instrument. If the

\* Page 203 of his *Treatise of Lithotomy*. Paris, 1681.

† *De Paracentesi urethræ in ischuriâ pertinaci*. These soutenue au College Roy. de Chir. de Paris, le 23 Aout, 1778.



introduction of the catheter is impossible, Thevenin\* advises, after discovering the canal of the urethra without the sound, to open it boldly, and pass the point of the knife even as far as the bladder. By this means a flow of urine will be procured, the passage of which should be farther facilitated by the introduction of a canula which should be left in the part. The causes which point out the necessity for the operation of the *boutonniere* are those obstacles which impede the passage of the catheter into the bladder, whether they occur in the canal of the urethra or exist in the neck of the bladder; but among these causes there are many that render this operation totally impracticable, such as a schirrus of the prostate, inflammation of the urethra or of the neck of the bladder, a varicous state of these parts, &c. under these circumstances this operation cannot be otherwise than dangerous. In fact it is the same in miniature as lithotomy by the apparatus major: it is dangerous; as its principal action is upon that part of the urethra the least extensible, its aponeurotic portion, which we are obliged to distend by force, to conduct into the bladder successively a conductor, a gorget, and a canula, which is left in its situation for a certain time. Authors also, who have practised this operation, are so well acquainted with the attendant dangers, that they have recommended carefully warm bathing and repeated bleedings; but notwithstanding every attention, the patient often sinks

\* Traite d'Operations, 4to. ch. 121, p. 162.

under the disease, as the two following cases will tend to prove.

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# C A S E I.

**I**N the year 1751 a man was admitted into the hospital of La Charité at Paris, for a retention with a fistula in perinæo, consequent to a schirrus swelling of the prostate; through the fistulous opening a considerable part of the urine was discharged, but with great difficulty. The operation of the *boutonniere* was performed, comprizing the fistula in the incision, with the view that the indurations by means of the suppuration should subside; the incision was prosecuted on the same principle as far as the neck of the bladder, with the intention of producing the same effect on the indurated prostate. When the operation was finished, symptoms of inflammation came on with such violence, that the means employed to save him were ineffectual: he died on the 4th or 5th day.



## C A S E II.

SAVIARD\* mentions that he was sent for to pass the catheter for a patient who had a suppression of urine occasioned by the use of a corrosive bougie which had produced a considerable eschar at the neck of the bladder, and inflamed the whole canal of the urethra; he succeeded the first time, but the second time he attempted not being equally successful, he called in Messrs. Bessin and Marechal, who, after a new ineffectual attempt, were of opinion that the operation of the *boutonniere* should be performed, from the consideration of the tension of the abdomen and the exhausted strength of the patient. The operation was performed by Saviard; "but," he says, "that the inflammation of the abdomen increased to such a degree, that shiverings, vomitings, and hiccups supervened, and which were the fore-runners of his death.

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There are, however, cases where we must have recourse to this operation; but the place where it

\* Recueil d'Observations Chirurgicales, Case 74, p. 324, 12mo. Paris, Collombat, 1702.

should

should be performed must be regulated by the cause of the retention. If a stone, for instance, should obstruct the canal of the urethra, to prevent the retention which will result, its extraction will be doubtless necessary : in this case we must make our incision on the part where it is situated, or remove it by the operation of the apparatus minor in case it should be situated at the neck of the bladder. In this last case, if the symptoms of inflammation should be considerable from such an extraneous substance resting on parts by nature extremely sensible, it is prudent to evacuate the urine, and calm the inflammation previous to the extraction of the stone. Another case that renders the operation of the *boutonniere* necessary, is when a portion of the canal of the urethra is obliterated from any cause whatever, which will obstruct the expulsion of the urine, as well as impede the passage of the catheter. In this, as well as in the first case, there is no precise place fixed for the operation; but we must necessarily make our incision to establish the continuity of the canal at the part where the obliteration exists.

This operation may be also employed in cases where the patient is exhausted from the pain and other symptoms occasioned by the presence of the stone, and unable to support the operation of lithotomy. Under these circumstances, this is the only resource that remains to render the pain more supportable; but the operation then to be performed is not the *boutonniere* described by authors. When we consider the improvements in the mode of performing lithotomy,



lythotomy, we are astonished that the same changes have not been adopted in this operation. However, the operation of the *boutonniere*, such as is described in the latest authors, is no other than the apparatus major on a small scale. These authors, with a little reflection, might have perceived, 1. that the forcible dilatations obliged to be exercised on the aponeurotic expansion of the urethra to accomplish the introduction of instruments into the bladder will occasion lacerations and contusions; 2. that the canal of the urethra has a portion entirely membranous situated between the bulb and the prostate, which is consequently very distensible, and for this reason well adapted for the operation. It is also on this part that all the lithotomists begin or ought to begin their incision, whatever may be their mode of finishing it. It is astonishing, when we consider the present enlightened state of surgery, that this portion of the urethra has not been preferred, as between this and the neck of the bladder there is only the space occupied by the prostate, which will readily dilate when properly managed. It is not then with the apparatus major that the *boutonniere* should be performed, but with the lateral apparatus if the expression is admissible, as the neck of the bladder in the *boutonniere* should remain untouched.

*An EXAMINATION of the different Modes of puncturing the Bladder.*

THE puncture above the pubis appears the most natural, and is really the easiest, as this viscus, situated naturally in the pelvis, under the circumstances of suppression, extends nearly as high as the umbilicus: as such it is not possible to make a false passage, but from the accidents to which it is liable it is certainly not entitled to this preference. One of the principal maxims in surgery *is to give issue by a depending opening to any fluids that may happen to be retained.* Now certainly the puncture above the pubis is not in conformity to this precept, because the urine contained in the bottom of the bladder is not within the reach of the canula. A second inconvenience is, that as at this period the bladder is extremely distended, it is apt to contract on itself and recede from the canula, notwithstanding the curvature given to the instrument to avoid this inconvenience. This circumstance of the recession of the bladder from the canula happens the more readily, as the anterior part of the bladder does not adhere to the internal parietes of the abdomen; but if this accident does not occur from this cause, it is likely to happen from the motions of the body alone.\*

\* The two last observations reported by M. Noel are well calculated to remove any apprehensions of this accident which  
Another



Another and a more serious inconvenience, and which occurred to Sharp himself,\* who was a great advocate for this operation, is that when the canula is plunged too deep into the bladder, under the idea of its not escaping from this viscus, its extremity is apt to wound the rectum, from which a gangrenous eschar will be apt to separate; an effusion of urine will take place in the pelvis, and the death of the patient ultimately ensue.

These inconveniences, from which other methods are exempt, ought to confine the use of the hypogastric section to extraordinary occasions, and under circumstances which we can neither prevent or influence.

The second part of the bladder where puncture is performed, (and which is preferred by Mr. Bordnave in a Memoir read at the Royal Academy of Surgery on the 6th of April, 1761) is the space situated between the insertion of the ureter and its neck. This operation is much more complicated. After placing the patient in the same position as for the stone, and even nearly horizontal, the index finger of the left hand is to be passed up the rectum, and the intestine

would produce diffusion of the urine in the abdominal cavity: but have we any reason to hope that circular adhesions will always take place between the anterior part of the bladder and the abdomen, and thus not only the advantage be obtained of the canula not escaping from the bladder, but also the opportunity of introducing a fresh one when the first is incrusted with tartarous concretions?

\* Recherches sur l'Etat présent de la Chirurgie, Paris, 1751, page 158.

drawn to the right, with the intention of removing it from the tuberosity of the ischium; a long trocar is then to be plunged in (such as Mr. Foubert employs) two lines from the edge of the tuberosity and about one inch above the anus; particular attention should be paid to pass the instrument in a direct line without inclining it on one side. Tolet appears to have been the first who has performed the puncture in perinæo; the description of the instrument he employed in this operation may be seen at page 208 of his publication on this subject. The puncture in perinæo has been mentioned by Juncker,\* at the same time it was proposed after Nuck in the *Bibliothèque Chirurgicale* of Marget.† In the year 1717 or 1718, Mr. Peyronie shewed in the king's garden a long trocar which he had successfully employed in a similar puncture. We may esteem it fortunate, if the trocar penetrates directly into the bladder, after piercing the fat and the muscles situated between the tuberosity of the ischium and the anus; and as this viscus is subject to much variation in its form, the surgeon will be often defeated unless he is perfectly clear in his ideas respecting its situation and figure. This disappointment is not without example, and there is sufficient to deter a practitioner from performing this operation, independent of the danger of wounding with the trocar the vasa deferentia, the vesiculæ seminales, the ureter, and the blood-vessels that go off from the

\* *Conspectus Chirurgiæ*, tab. 97, pag. 674.

† Tom iv. p. 304.



tuberosity of the ischium to be distributed to the neck and to the inferior parts of the bladder.

The third manner of puncturing the bladder is through the intestinum rectum. We are indebted for this to Mr. Fleurant, surgeon at Lyons,\* as well as for the particular trocar employed in the operation: it consists in passing the left index finger up the rectum, as high as possible; the end of the finger will then press against that part of the gut pushed in consequence of the distended state of the bladder; the trocar (with the point concealed in the canula for fear of wounding either the finger or intestine) should then be passed along the finger, and may be made to penetrate into the bladder by means of pressure kept up with the palm of the other hand; attention should be paid to pass it into the middle of the bladder, and as high up as possible, to avoid wounding the vesiculæ feminales; the canula should be left in, which should be stopped with a cork, and retained in its situation by a convenient bandage until the cause of retention of urine has ceased. If we attend to the part of the bladder wounded in this puncture, to its ultimate adhesion with the intestine, to its slight degree of thickness at this part, and consequently the little pain experienced, we must admit that this species of puncture should be preferred. In this operation, the canula, from being inclined, admits the complete evacuation of the urine, nor is it subject to slip out when the bladder contracts: this operation is unat-

\* *Mélanges de Chirurgie par Pouteau, Lyon, 1760, p. 500.*  
tended

tended with danger, and the pain absolutely trifling. The probability of wounding the vesiculæ feminales with the trocar has been urged as an objection; but if the surgeon will strictly attend to the directions laid down by Mr. Fleurant to pass the finger as high up as possible, when, by choosing the middle, we the more readily avoid wounding these parts as in retention of urine, the bladder, prodigiously distended in every sense, removes the vesiculæ feminales into a more horizontal situation and farther from its center. The inconvenience occasioned by the canula remaining in the rectum during the time of the expulsion of the fæces (and which is really of no consequence) has furnished a second objection: this is easily obviated by employing the flexible canula adapted to the instrument, since the publication of his memoirs; this conforms itself to the different inflexions of the intestine, and from its smallness will form no impediment to the evacuation of the fæces, particularly when clysters are employed. M. Bordnave seems to apprehend that the presence of this extraneous body in the rectum would produce a tenesmus in consequence of the irritation it would excite: but why will this canula occasion this irritation sooner than the lead wire employed in the cure of fistulæ in ano, wherein a greater portion of intestine is included? From daily experience it is found that this accident rarely occurs when tents, &c. are introduced up the rectum, from whence we may conclude that it occurs still more rarely when the bladder is punctured by the

rec-



rectum.\* The two following cases seem to prove what has been advanced.

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### C A S E III.

**A**BOUT Christmas, in the year 1764, a man of the name of Laborde, a cobbler, about 50 years of age, was brought into the hospital at Dijon, for a blow he received on the perinæum by a fall from the top of a ladder: he was admitted about 30 hours after the accident. From the considerable degree of contusion, great pain and fever supervened, accompanied with retention of urine. Mr. Hoin observes that his father, who attended the accident, from remarking the considerable distension of the bladder that extended as high as the umbilicus, attempted in vain to pass a catheter; the cavity of the urethra was entirely obliterated at that part near where the contusion was received in consequence of the swelling

\* Mr. Noel, in his reflections on the cases he relates, says, that the method of operating by the rectum appears very embarrassing. Had this ingenious surgeon practised it, he would soon have admitted that it was easier than the hypogastric section. With respect to the pain and inconvenience attributed to the circumstance of the canula remaining in the intestine, they do not occur in the cases just related.

of the surrounding parts forming a compression on this part. Under these circumstances, Mr. Hoin senior, thought it was necessary to have recourse to the puncture, and preferred to do it up the rectum; it was done immediately, to the great ease of the patient. Notwithstanding every attention to the treatment of the injured prostrate, the formation of a gangrenous eschar could not be prevented, which sloughed off spontaneously: this eschar not only comprehended the integuments of the perinæum, but more than an inch of the canal of the urethra. From this moment the symptoms went off, the retention ceased, and the canula was withdrawn as being of no farther use. The opening made by the trocar did not admit of the passage of any urine, in consequence of the precaution taken to introduce a catheter in the bladder, which was suffered to remain: this also favoured the cicatrization of the wound in perinæo, the cure of which completely took place, and permitted the urine to pass through by the penis without passing through the wound in the urethra, which in a manner was regenerated by the hard and compact form of the surrounding integuments and cellular substance. This patient was dismissed the hospital perfectly cured. Unfortunately some time after, in consequence of intemperance, the cicatrix ulcerated and admitted the urine to pass in part by this passage: this continued till his death, not from a deficiency in the art of surgery to render him assistance, but his refusing to submit to the necessary methods.



*A fourth case is related by Mr. Hoin, where the most complete success was obtained by passing the curved trocar up the rectum. Mr. Hoin observes that the urine flowed through the canula for two days after the operation, when, from some accident in moving the bandage, the canula came out, the urine continued till the next day to pass out of the aperture made by the trocar, a hollow bougie was then passed into the bladder, and in 24 hours the small aperture in the rectum, made by the instrument, was completely healed; this re-union was even so firm, that when the bladder was in a state of distension not a drop passed through this opening into the gut.*

*Mr. Hoin observes that not any of the patients on whom this operation has been performed have been inconvenienced by the presence of the canula, not even in the evacuation of their fæces; and that from taking all circumstances into consideration, this operation is indisputably intitled to the preference; an opinion that is still farther supported by the success it has met with when performed by Mr. Fleurant the inventor, and by Messrs. Le Blanc, Mr. Hoin the father, Dr. Hamilton, and Mr. Reid, an English surgeon resident at Chelsea.*

*Oblique Fractures of the Femur, treated by permanent Extension.*

## C A S E I.

MARY Bougon, 68 years of age, as she was carrying a burthen fell on her right knee, with her leg bent and carried inwards. At the instant of the fall she heard a cracking noise, and felt an acute pain a little above the knee, which also extended to the thigh: she was lifted up by some passengers, but unfortunately fell again on the pavement on her right knee. Some blood was remarked to come from a wound formed by a small portion of the bone which had pierced the skin, about one inch above the external condyle of the femur. This woman was carried to the Hôtel Dieu on the 10th of April, 1790, two hours after the accident, by some persons who were not attentive to prevent the motions of the thigh. The right thigh was nearly two inches shorter than the left, the point of the foot turned inwards, the derangement was but slightly sensible from the swelling and the thickness of the surrounding soft parts; an ecchymosis extended from the lateral and outside part of the knee, as high as the inferior fourth part of the thigh; the anterior rectus and the vasti externi, and interni muscles were in a state of strong contraction; the crepitus was distinctly heard on

S 2

moving



moving the inferior part forwards and backwards, outwards and inwards. These symptoms evidently indicated an oblique fracture of the femur; and from the particular mobility of the external condyle, it was obvious that this apophysis was separated from the inferior part of the femur. From the irritation kept up, by the points of the fractured bone inducing violent muscular contraction, some difficulties occurred in the reduction: they were, however, overcome by pursuing the means indicated in page 228 of the first volume of the Journal; the same dressings as there described were applied on the knee and the inferior part of the thigh, and the permanent extension kept up in the same manner. The patient passed this day with some little agitation, which augmented towards the evening and accompanied with some spasmodic contractions. The next day she was quiet, the eccymosis nearly dissipated, and the swelling much diminished: it did not however totally disappear till the third day. The pain ceased at the same time, and the treatment was followed with no other accident, not even by the slightest degree of fever. The wound scarcely suppurated. After it was cicatrized, the dressings were taken off, which before had been applied every day. On the 30th day, union became firm, but not sufficiently so to be left to itself. The bandages, &c. were left off on the 56th day, and on the 60th the patient tried to support herself on crutches. She left the hospital a month afterwards, with the thigh absolutely of the same length as the other, and walked as well as a little stiffness and

and swelling at the articulation would permit : this rigidity had not yet had time to dissipate by exercise.

*Eight cases more are related, where the same treatment was observed of permanent extension, &c. and attended with the same success.*

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#### REMARKS and OBSERVATIONS on Fractures of the Thigh.

Celsus has advanced that fractures of the femur are always followed with a shortening of the thigh : this has been repeated for a long time after him : even at this time, there are few practitioners but are of opinion, that the union of this bone, when obliquely fractured, will be always attended with a greater or less degree of deformity. It should be observed that the dressings employed in other fractures, in these instances are not applicable, because the fractured surfaces are two inclined planes sliding over each other on the least impulsion, instead of supporting one another, as is the case in transverse fractures. Though the patient, in the first instance, is placed horizontally in the bed, from the sinking in of the lower part of his body the trunk will get inclined,

S 3

push



push down the superior fragment, whilst the inferior forms a resistance from the friction of the leg on the bed, as well as from its bulk, when the foot is more elevated than the thigh. From this inconvenience, united with muscular contraction, results a greater or a less degree of derangement ; the points of the bone keep up an irritation on the muscles, augment their contraction, and sometimes occasion spasms. Under these circumstances, we have known that no force has been capable of replacing the bones in their natural situation, even though the person was old and enfeebled. The only dressing we can oppose to this species of derangement in oblique fractures of the femur, is on a plan that will prevent the trunk bending on the leg, or the leg bending on the trunk. The ancients were acquainted with this truth : many modern practitioners have admitted it, and in consequence have kept up an extension during the whole treatment.

The success obtained by this method has not convinced theorists of its utility : they have opposed to facts a crowd of objections specious but contradictory to experience. The pretended insufficiency of extension, the swelling and pain it is said to produce, the wounds, contusion, and even gangrene, said to be occasioned by the pressure of the strings, &c. employed in keeping up this permanent extension, are all vague objections without the least foundation, and which can never take place when the extension is properly applied. Permanent extension is then equally applicable in cases of oblique fracture as in fractures  
of

of the neck of the bone. We should here observe, that Mr. Vermandois, surgeon at Bourg, since the year 1777, has entertained the same ideas of the treatment of fractures of the neck of the femur: he has imagined methods of retention analogous to those which we have found from experience entitled to the preference. Their description form a part of some Chirurgical Reflections inserted in the 66th volume of the Journal de Medecine, p. 51, and in the following year 1786.

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*Case of the Cesarian Operation, begun by a Bullock's  
Horn and accomplished by Nature.*

[By DON ANTOINE ZUBELDIA, a Spanish Physician.]

ON the 25th June, 1785, at 8 o'clock in the morning, the relator of this case was sent for with another surgeon, to the assistance of Mary Grattien, a robust woman, in the 9th month of her pregnancy, and who had been already the mother of many children. She was found weltering in her blood and in a state of fainting, from a wound she had received in the superior part of the hypogastric region from a bullock's horn. The horn had transversely divided the integuments of the abdomen and the peritonæum



to the extent of 8 inches, and allowed the uterus to pass out, which was wounded at its anterior part and in the same direction. The wound of this viscus, though deep, did not penetrate its cavity. Whilst the surgeons were disposing themselves to perform the operation, nature accomplished it, without any assistance, by exciting a violent hiccup, which produced a complete rupture of the matrix throughout the whole extent of the wound, and from which a dead child was expelled; the placenta, which was detached, was extracted by the surgeon; the uterus immediately contracted and regained its natural situation. The same surgeon, after removing the clots of blood that covered the rectum, omitted dressing the wounded uterus till the next day. From the frequent faintings that supervened, the patient was placed in that situation most favourable for the blood that flowed from the lacerated vessels. The next day, after a consultation with other surgeons, it was agreed to attempt the re-union of the wound by the application of the quilled future. The surrounding parts were fomented with oil of roses, and covered with an anodyne cataplasm. Some degree of inflammatory fever now supervened. Venæ section was ordered, and the blood had a buffy appearance, which was the same in the evening on repeating the bleeding. The most powerful anti-phlogistic remedies were employed without producing any sensible effect till the 7th day, when, from the smallness of the pulse, the prostration of strength, and the confusion of ideas, a typhus fever was apprehended.

On removing the dressings, the edges of the wound were livid, flaccid, and covered with an ichorous fetid sanies. Her linen had not been changed since the 4th day from the accident. The bed was dirty, and infected with corrupted blood. The chamber narrow, indifferently aired, and continually crowded with visitors. The season remarkably hot. The threads of the suture were cut, the wound covered with lint, and compresses constantly moistened with decoction of bark were applied to the abdomen; to these means were joined the use of tonics and antiseptics, particularly the bark and the mineral acids; the bed was changed, the chamber sprinkled with vinegar, and fresh air admitted. In a few days the pulse improved, the delirium subsided, and the ulcer, instead of sanies, furnished well conditioned pus. The lochia, which had not flowed, were now discharged in their natural way.

By the 21st day, the patient found herself tolerably well, with only a little remaining fever, which disappeared a few days afterwards by a continuation of the same remedies. A collection of pus took place under the right transversalis muscle, which pointed towards the pyramidalis; this was discharged by a small opening. The ulcer became simple and cicatrized towards the end of the sixth week. This woman was cured in this manner of this dreadful accident, and was only subjected to the inconvenience of wearing a bandage to prevent a ventral hernia. From this period she has enjoyed an excellent state of health, and



and has since lain in with two fine children, which she suckled.\*

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*Cases of cartilaginous Substances floating in the Articulation of the Knee.*

C A S E I.

[By Mr. BROCHIER.]

**I**N the winter of the year 1777, Mr. —, a captain of dragoons, 28 years of age, was thrown down backwards from an accident occasioned by a door that had been shut with considerable force, and which had included his leg; he instantly felt a violent sense of distension at the knee joint, accompanied with an acute pain and a noise similar to what is heard by cracking the fingers, but considerably louder. The patient kept his bed, and was at first treated with emollient fomentations, which were soon relinquished in consequence of the enormous swelling of the knee.

\* The editor observes that he knew the woman who forms the subject of this case. Three years after the wound he applied a proper bandage to retain a small ventral hernia, the only inconvenience that resulted from the accident.

Some little ease seemed to be obtained by the use of fomentations with sea-water. The swelling lasted for eleven months: it increased by rest and by the smallest degree of excess, and diminished, on the contrary, by a regular sober life, assisted with moderate exercise. Three months after the accident, an extraneous moveable substance was felt in the joint of the affected knee, situated before its external condyle, and which soon passed before the internal one. This body was felt at different points of the articulation, but its general situation was above the patella by the side of the extensor tendon of the leg: in this situation it was productive of the least pain: when it got behind the patella, the patient was incapable of standing or walking. Sometimes it was engaged under the condyles of the femur: it then absolutely intercepted the motions of the leg and produced violent pain, accompanied with swelling, which lasted until this extraneous substance had regained its situation before the condyles, or rather by the side of the extensor tendon. This substance one day disappeared without occasioning any particular symptoms; it was concealed for the space of six months, during which time the articulation was perfectly free. The patient, who was now free from every inconvenience, believed himself perfectly cured, when it suddenly reappeared in consequence of a quick extension of the leg. The pain and uneasiness it produced under certain situations, and the apprehension it would produce consequences still more serious, induced this officer to consult different persons, who were all  
deceived



deceived in the nature of the case. Some took it for a sprain, others for a venereal symptom, for which they administered mercurials; there were even those who persuaded the patient that the solid mass felt under the skin was mercury collected in the articulation. Mr. Default, who was consulted in the year 1784, seven years after the accident, instantly recognised the disease, which he had met with in several dissections: he proposed its extraction, and proceeded in the following manner: the surgeon, after relaxing the capsular ligament by extending the leg, brought the extraneous body on the inside of the articulation against the attachment of the capsular ligament, and secured it in this situation between the index finger and thumb of the left hand, whilst an assistant drew the integuments forwards towards the patella. All the parts that covered this extraneous body were now divided by a longitudinal incision, one inch in length, and its extraction accomplished by pushing it from above downwards, and raising it inferiorly with the end of the knife. This substance, on examination, was found similar in colour to the cartilages that cover the articular surfaces: it was three quarters of an inch in length, six lines and an half in width, and three lines in thickness; its surfaces were smooth, one concave and the other convex; its circumference irregular, disseminated with red points, forming small depressions; the inside was ossified, the outside of a cartilaginous texture. As soon as the substance was extracted, the assistant let go the integuments which he had drawn forwards; they consequently

quently returned to their natural situation, on the inner side of the knee joint, in such a manner, that the external wound in the integuments was situated more inwards than the one in the capsular ligament. Two advantages were procured by this means: on the one hand, air was prevented from penetrating into the articulation; and on the other, the floating portion of capsular ligament, retained inwards by the skin, was more likely to attach itself to the condyle, in case it did not unite to the other portion of the capsule divided near its attachment. The edges of the wound were brought in contact by means of a uniting bandage; dry lint and compresses were applied, and retained on the part by a slight bandage; the limb was kept in a state of extension. The patient at first experienced a slight degree of shivering, which soon subsided. No pain or swelling whatever supervened in the sequel. The dressings were not taken off till the fourth day. The bottom of the wound was already united, though the outside had suppurated a little. The same mode of dressing was continued for six days; the cure was then completed; and the officer returned to his ordinary occupations.



## C A S E II.

**M**R. Default was consulted, in the year 1785, by a servant, from 45 to 50 years of age, who many years before had injured his knee against the shaft of a carriage. Thrown down by the violence of the shock, he remained a long time on the pavement, without the power of raising himself. A considerable degree of inflammation took place round the articulation, which did not diminish for a considerable time, notwithstanding rest, bleeding, poultices, and an antiphlogistic regimen. Some degree of swelling, attended with weakness of the articulation, always remained. The patient was at intervals sensible of acute pain, always followed with an increase of the swelling, and an impossibility of supporting himself on the leg. Rest was again observed, and cataplasms applied. In the space of some days these symptoms gave way. After this report of his case, Mr. Default, having carefully examined the articulation, discovered, on the outside of the patella, a body which easily admitted of displacement. Mr. Default moved this substance to the inside of the knee, and fixed it against the attachment of the capsular ligament, and completed the extraction, as in the preceding case. The wound united without any accident, but on the 5th day a swelling, attended with violent pain, supervened on the middle part of the

the leg. This swelling terminated by an abscess, the opening of which did not mitigate the pain of the leg; this did not subside until a swelling and a similar abscess formed on the middle part of the thigh. These abscesses were not cured before the expiration of two months; and what is a singular circumstance, the knee was not the least affected during the whole of the time. It is proper perhaps to remark, that this patient had been long subject to rheumatic pains, which affected different parts of his body successively. The substance extracted from the articulation was cartilaginous, and ossified in its center: it was eleven lines in length, eight in breadth, and three in thickness; one of its surfaces concave, another convex, and of an oval shape.

*Three more cases are mentioned of the successful extraction of these extraneous bodies. The gentleman who formed the subject of one of these cases had the operation performed twice: an interval of more than a year transpired before the second operation.*



REMARKS on the Existence and Extraction of extraneous Bodies situated in the Articulation.

The existence of extraneous bodies in the articulation, such as we have just described, is by no means a rare occurrence, though unknown to the ancients, and even to the majority of French practitioners.

Paré is the first who speaks of this species of concretion: he says, that *a hard, polished, white body, of the size of an almond*, was discharged from the knee of a patient, in the year 1558, in which he had made an incision for an *aqueous aposteme*, (without doubt an *hydrops articuli*).\*

Similar concretions in the knee of an ox have been remarked by Dr. Vagnerus.† One of these extraneous bodies was found on dissection in a knee joint, by Dr. Alexander Monro. Mr. Simson extracted one of these some years afterwards, which at first he did not suppose was in the cavity of the articulation, notwithstanding its mobility, and the pain it occasioned.‡ Since these periods, examples have been multiplied of this disease.

It is unnecessary here to describe the symptoms. The characteristic distinctions pointed out by Theden,

\* Liv. XXV. chap. 15, ad fin.

† Eph. nat. Cur Dec. 2. an 4. (1685) & Col. Acad. part 1. t. 3, p. 660.

‡ Medical Essays, &c. by a Society at Edinburgh, N<sup>o</sup> 20, 1736. Bell,

Bell, and Bromfield, are absolutely the same; \* others, as Messrs. Cruikshank† and Mohrenheim,‡ only add, that in consequence of this substance remaining in the articulation, hydrops articuli will be sometimes produced.

The case related by Paré, as well as that by Mr. Simson, where four ounces of fluid escaped when the substance was extracted, seem to favour this opinion; but, however, hydrops articuli more frequently occurs than the existence of these extraneous substances, and when they are found they remain for a long time without hydrops articuli supervening. We are, therefore, justified in doubting that these diseases are independent of each other, even if they exist at the same time.

Mr. Bell speaks of cellular concretions adhering to the different parts which compose the articulation: he seems to think that they take on a disposition to harden, gradually separate themselves, and by this means become a free detached body in the cavity of the articulation. Morgagni|| has met with ossious bodies detached in the same joint with cartilaginous ones, which have adhered to the capsule by a point of their surface; others have been seen attached to the

\* Chirurgical Cases and Observations, vol. i. page 332, and Richter's Chir. Bib. t. ii. p. 133.

† Progrès ult. de Chirurgie, trad. par Chayrou, sect. 16. System of Surgery, vol. v. ch. 38, sect. 3.

‡ Med. Commentaries by a Society at Edinburgh, vol. iv. part 1—4; and Richter's Chir. Bib. t. v. p. 74.

|| De Sed Epist. 57, art. 14.



contiguous parts by a kind of ligament or cellular pedicle of a greater or less degree of length.\*

Some authors are of opinion, that these extraneous substances are only formed in the articulation of the knee;† but Haller has discovered a great number of them in the jaw of a woman where the articular cartilage was destroyed;‡ they have been also remarked in the articulation of the foot; and Mr. Bell recommends them to be extracted in the same manner as when situated in the knee. Bodies completely ossified have been found in the articulation of the leg,|| sometimes they are cartilaginous, and ossified in their center, and at others only cartilaginous; that mentioned by Monro was only a cellular nucleus, invested with a cartilaginous crust.

Most frequently only one of these substances are found to exist in the articulation at one time; but Morgagni has found twenty five at one time. Messrs. Henkell and Bromfield have extracted two at the same time.§ The same circumstance also occurred to the subject of our last mentioned case.

Messrs. Middleton\*\* and Gooch†† have endeavoured

\* Monro, Theden, Bell, Locis. cit.

† Reimarus Diss. de Tumore Ligamentorum circa articulos, Leide, 1757, 4to.

‡ Prog. de Induratis Corp. Hum. part 5, & Morgagni de sed Ep. 57, art. 15.

|| Morgagni Ep. citat. art. 14.

§ Reimarus.

\*\* Ibid.

†† Cases and practical Remarks in Surgery, London, 1758; and practical Treatise on Wounds, &c. Norwich, 1767.

to conduct the extraneous body into that situation that produced no pain, and to retain it in that position for a long time, under the idea that it would adhere to the contiguous parts. This species of palliative cure appeared to succeed, but at the end of some months they had not the opportunity of seeing their patients. We should recollect, that the result of these cases does not ensure success to this method, for the extraneous substance may again become moveable, after being concealed even for six months without any symptom whatever indicating its presence.\*

The only radical cure then on which we can depend, is its extraction by dividing the integuments and the capsular ligament. Penetrating wounds in the articulation, from long and ancient prejudices, have ever been viewed as highly dangerous. Mr. Simson intimates, that he should not have dared to perform the operation, had he not conceived that the extraneous body he was about to extract was situated in the cellular substance that covered the capsular ligament. Since this period, this operation has been frequently repeated. Those who have performed it, have deemed it highly essential to prevent air getting into the cavity of the joint, consequently all have attended particularly to cover the orifice instantly after the extraction of the substance. Messrs. Bromfield, Bell, and Default, make their incision in such a way, that the aperture in the integuments does not correspond with the opening in the capsular

\* Vide Case I.



ligament: it is with this intention Mr. Bromfield retracts the integuments downwards towards the leg, Mr. Bell upwards to the thigh, and Mr. Desault towards the knee. Other practitioners have neglected this precaution. Messrs. Simson, Hewit, Theden, Gooch, Ford, Subzer, and lately M. Vielle, are content with stretching the integuments on the extraneous body, without changing their natural situation. Mr. Cruikshank recommends the opening in the integuments to be as small as possible: this plan may perhaps expose the edges of the wound to be confused in the extraction of the extraneous substance: in this case, re-union will become difficult; an effect directly opposite to the view of the author, which is to exclude the air from the cavity. We are only acquainted with two cases where the incision through the capsule was attended with extreme pain: the one related by Mr. Simpson, and in the patient who formed the subject of the second case; the other patients suffered little. However, all authors are apprehensive of the consequences of this operation. Messrs. Cruikshank and Bromfield believe that it is never unattended with danger, and very frequently produces the most serious symptoms. Mr. Bell even adds, that the symptoms have been sufficiently violent to necessitate the amputation of the thigh. Ancient and long received prejudices respecting the contact of air, may perhaps have caused these dangers to be exaggerated, and symptoms may have been attributed to the opening in the articulation, which an unprejudiced observer might, with more propriety, have referred to another source.

source. Messrs. Ford,\* Subzer,† and Vielle, have never seen any accidents consequent to this operation. Henckel has been equally successful, although he opened both sides of the knee joint at one time. Messrs. Bromfield, Gooch, and Bell, have each twice performed the same operation, and Theden three times with the same success. Mr. Default has also succeeded three times. Mr. Ford's patient was attacked with the measles eight days after the operation, and one of Mr. Theden's died of a malignant fever prevalent at this period, which seized him the very day of the operation without producing the least effect on the articulation. Amidst such a variety of success, three cases have been only followed with serious symptoms: Mr. Simson's, Mr. Hewit's, related by Reimarus, and the subject of Case II. that we have related; and it is even a question whether the symptoms were immediately produced by the operation or not. Mr. Simson's rode on horse-back a few hours after the operation, and was exposed a considerable time to the cold air; and in the case we have related, the patient was constantly subject to rheumatic pains. In Mr. Hewit's, the incision made on the outside of the knee, and towards the upper part of the patella, was attended with but little pain; the symptoms never appeared until the expiration of 36 hours; the pain principally affected the ham, and that side of the knee opposed to the wound. In this case it is

\* Med. Obs. by a Society of Physicians in London, vol. v. and Richter's Bib. t. iv. p. 68.

† Richter's Bib. t. viii. p. 492.



certainly too much to affirm, that this operation produced these symptoms. Are there not numerous examples of simple wounds that have produced very serious symptoms from particular causes, as morbid affections of the primæ viæ, a diseased state of the secretions, &c. It is a fact universally admitted, that bleeding, even when performed in the best manner, has been sometimes followed with pain, inflammation, and abscesses, under particular circumstances of the constitution.

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*Case of an Extirpation of a considerable Part of the Thyroid Gland.*

[By Mr. GIRAUD, Surgeon to the Hôtel Dieu.]

**I**N the year 1784, J. Hyons, 20 years of age, experienced an acute pain at the middle and anterior part of the neck, in consequence of a violent extension of the head : this pain, which was only momentary, was followed with some difficulty of motion. About three months afterwards, a small, hard, indolent tumor appeared on the right side of the trachea ; this swelling was unattended with pain or alteration in the colour of the integuments ; the tumor seemed to be raised by a pulsatory action, which seemed to prove the

the existence of a large artery situated underneath, and in fact its base was situated on the general course of the carotid artery. The patient, feeling no inconvenience, neglected it until June, 1788. At this time, the tumor was one inch in diameter; its progress, which in the first instance was slow, now augmented with proportionable rapidity; internal remedies, and topical applications, had no effect in preventing its increase; a fluctuation in its center was soon evident; an incision was then made into this part, and a quantity of yellow serosity discharged. Three months after this operation, which was not of the least service, recourse was had to caustics, which were repeatedly applied without any advantage being obtained. On the 20th of March, 1791, she presented herself for admission at the Hôtel Dieu. At this period, the tumor was two inches in diameter, round, hard, and attached to the right and middle part of the trachea, and pushed outwards the sterno-mastoideus muscle. Independent of its being sensibly raised by each pulsation of the arteries, it obeyed the motions of deglutition, and in a slight degree impeded the passage of the solid aliment. The patient, earnestly desiring to get rid of such an inconvenient deformity, determined to submit to its extirpation, which appeared her only resource. The danger, the length of time, and the pain necessarily annexed to the operation, were not concealed from her. The operation, after a few days previous preparation, was performed in the amphitheatre by Mr. Desault in the following manner: the patient being



laid on her back, a little inclined on the left side, with the head and neck more raised than the rest of the body, the surgeon made a longitudinal incision through the middle of the tumor, beginning one inch above, and finishing one inch below, to allow room to finish the operation with ease; in the first section he cut down as far as the gland, dividing the integuments, the platysma-myoides, and some fibres of the sterno-hyoideii and sterno-thyroideii muscles; an assistant, with the view of fixing the tumor, drew towards the left the inside edge of the wound made by the incision, whilst the surgeon detached it from the sterno-mastoideus muscle. In dissecting the cellular substance which united the parts, two small arteries were divided, which were raised by a pair of dissecting forceps and secured by ligature. The external surface of the tumor being thus disengaged, the internal part was detached in the same way. The tumor was drawn outwards by means of a hook, that it might be separated with more ease from the anterior part and from the side of the trachea. In the course of this dissection, the branches of the thyroid arteries were successively tied, as fast as they were divided. The assistant to whom the hook was confided directed the gland from within and forwards, whilst the surgeon finished the dissection outwards and from above downwards. This part of the operation was the most minute and difficult: it was necessary by means of a sponge continually to wipe away the blood, which necessarily prevented the parts from being easily distinguished, and obliged the surgeon

surgeon to divide but a little at a time, and previously to feel with his finger those parts he was about to incise. By this cautious dissection of parts the superior and inferior thyroid arteries were laid bare, and afterwards secured by ligature by means of a blunt crooked needle. They were afterwards transversely divided, and the remaining part of the tumor detached from the trachea, to which it strongly adhered. The wound resulting from this operation was near three inches in depth: it was outwardly bounded by the sterno-mastoideus muscle, and inwardly by the trachea and œsophagus; posteriorly by the carotid artery, and by the nerves of the eighth pair, which were exposed at the bottom of the wound. After the wound was well washed with warm water, and cleared from the blood, it was filled with coarse lint, powdered with colophony; square compresses, secured by a bandage moderately tight, formed the rest of the dressing. The extirpated tumor was five inches in circumference; and on examination was found to differ in no particular from schirrus glands, except that in the center there was a cartilaginous nucleus. The patient supported this long, difficult, and painful operation with uncommon firmness: she passed the rest of the day without experiencing any other symptom than a slight shivering, generally consequent to large wounds. The following night she complained of a sense of heat in the neck, and some difficulty in deglutition. The next day a little ease was obtained by moistening the dressing with a decoction of marshmallows. A weak drink of the herb

dog's



dog's tooth, acidulated with oxymel, was prescribed. On the 3d day the fever was very moderate, but the difficulty in swallowing had considerably increased at this period; the compresses and the external lint were removed, and fresh applied. On the 4th, the fever ceased, and deglutition became less painful. Suppuration now became established. The next day all the lint was detached, and the whole of the dressings renewed. The wound was in a good state: it was dressed with soft lint and compresses moistened with an emollient decoction; a practice which was continued for the following days. No particular circumstance occurred during the cure. The wound followed the ordinary progress and was cicatrized at the end of a month. The patient left the hospital, perfectly cured, the 34th day after the operation.

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#### NOTE of the EDITOR.

The extirpation of the thyroid gland is an operation extremely difficult, and certainly highly dangerous, when performed by an operator but moderately exercised in the practice of his profession. The number and size of the arteries necessary to divide, the proximity of the trachea, œsophagus, and carotid,  
near

near which the knife must necessarily pass, are the principal dangers that the operator should avoid. These are the circumstances which have deterred the majority of practitioners from performing it, particularly those who from long established prejudice have been deterred from using ligatures in cases of wounded arteries. Examples of this operation are very rare. The first time that Gooch undertook to perform it, he was deterred from finishing it by the hemorrhage, and his patient died on the 8th day. The second time he succeeded better, but was incapable of securing the vessels, and succeeded by stopping the hemorrhage, which would otherwise have been mortal, by causing the parts to be compressed by the hand of an assistant for the space of 8 days.\*

A. F. Vogel and Theden have practised the same operation with the most complete success. All danger from the hemorrhage, or inconvenience arising from the discharge of blood, may be obviated by pinching up the small vessels, tying them as fast as they are divided, and by discovering and tying the large vessels previous to their division; other parts that cannot be wounded without danger, are to be avoided by dissecting slowly and a little at a time, and feeling with the finger every part previous to its division with the bistoury.

\* Gooch's Med. and Chir. Obs. p. 130; Bell's System of Surgery, vol. v. p. 525; and la Bib. Chir. de Richter, t. ii, 4e partie, p. 128.



*Fractions of the superior Part of the Humerus.*

## C A S E I.

[By Mr. VERGES, formerly Surgeon to the Hôtel Dieu.]

**M.** TALLARD, 66 years of age, was admitted into the Hôtel Dieu on the 13th of March, 1789, for a fracture at the superior part of the left arm occasioned by a fall on the pavement a few hours before her admission. The pain, difficulty of motion, and the crepitus, evidently pointed out the nature of this fracture. To reduce it, the patient was seated on the edge of her bed, the arm a little separated from the body and carried a little forwards, an extension was made by an assistant making use of the fore-arm, in a state of demi-flexion, as a lever: this assistant placed one of his hands behind the wrist as a point of support, whilst the other hand, applied on the superior and anterior part of the fore-arm, was the moving force. This manner of making the extension left exposed all the parts on which the bandage should be applied. A second assistant fixed the trunk by drawing the uninjured arm towards him, in a direction perpendicular to the axis of the body. The reduction was accomplished with the slightest degree of exertion: when the surgeon, after examining

ing the fractured part, was certain that it was exact, he took a roller, four or five ells in length, and three fingers breadth, dipped in the aq. veg. and applied one of the ends to the upper part of the fore-arm, and secured it by two circular turns; then passed it up to the superior part of the arm by means of reflected turns; two turns of the bandage were then passed under the opposite axilla, the head of the bone brought back on the shoulder, and retained there by an assistant; whilst the surgeon applied three strong splints of about two fingers in width; one in front, extending from the bend of the elbow as high as the acromion, the two others were placed outside and backwards reaching from the external condyle and olecranon to the same height; the roller was then passed over the splints from above downwards in the same manner as before, and finished where it begun at the superior part of the fore-arm. A stuffed pad was placed between the arm and the trunk: its width was from four or five inches, its thickness, at its inferior part, was from two to three, terminating superiorly in the form of a wedge and of sufficient length to extend from the axilla to the bend of the elbow; the thinnest extremity of this pad was fixed to the superior part of the bandage with two pins. The arm, thus supported, was maintained in this position by some turns of the bandage passed round the trunk. To prevent the dressings being deranged, they were covered by a napkin in the form of a body bandage, and which served at the same time to keep the fore-arm half bent, as in a sling.

This



This dressing contained the fractured portions extremely well, and retained the arm and shoulder in a state of perfect immobility. The patient experienced not the least inconvenience or pain during the whole of the treatment. As the fracture was simple, no bleeding or particular regimen was employed; the dressings were renewed twice before it was consolidated. On the 25th day they were entirely relinquished; but by way of caution, the arm was retained in a sling until the 30th. The patient left the hospital some days afterwards so completely cured, that it was not possible by the touch to discover the place that had been fractured.

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## C A S E II.

**N** Perrée, on the 23d of February, 1790, fractured the right humerus very near its neck: she was admitted into the Hôtel Dieu the next day, and treated in the same manner as in the preceding case, and precisely with the same success. The dressings were left off on the 28th day.

*Six more cases are related that terminated in the same favourable manner from the mode of treatment just described.*

## OBSERVATIONS on Fractures of the superior Part of the Humerus.

The diagnostic of this species of fracture is not difficult : it may be known from the violence of the shock, and the cracking that attends it, the pain, the immobility of the arm when left to itself, and its great degree of mobility when influenced by external force; the sense of pricking and tearing that these motions produce; the direction of the humerus, forwards, backwards, inwards, or outwards, according to the nature of the displacement; the projection of the inferior fragment, the inequalities of which may be felt through the deltoid or pectoralis major; the depression remarked on the shoulder, lower than in a luxation; the immobility of the head of the bone, which is easy to discover when there is not much swelling, when the inferior fragment is moved; and by the crepitus, which may be heard on extending and rotating the limb. The majority of these symptoms, in many particulars, accord with a luxation of the humerus; and from this circumstance errors often arise in the treatment, producing very serious consequences. These may be avoided by an attention to the characteristic signs which we have pointed out under the article of luxation. The displacement of the ossious fragments, in this species of fracture, is not often very considerable; the arm, hanging by the side of the trunk, keeps up by its weight a sort of permanent



permanent extension, and opposes by this means a continual resistance to the muscular contraction. The reduction, generally speaking, is not attended with great difficulty. The different machines invented for the purpose of extension become absolutely useless if it is well directed by the means of the hands of assistants. It is sufficient, to obtain the necessary degree of extension, to fix the trunk, and slightly extend the fore-arm: to effect it, we must adopt the advice of Hippocrates and the other ancients, and place the muscles in a state of relaxation by holding the arm at a little distance from the body, and keeping the fore-arm half bent. The extension made on the fore-arm, as in Case I. offers many advantages. Independent of its being easier, and requiring less force than when made on the fractured arm, it admits of the assistant keeping the limb in the same position whilst the surgeon applies the dressings; it consequently preserves the bones in that state of apposition in which they were originally placed. For this reason, to avoid abandoning the extension till the bandages are completely applied, we make use of the uninjured arm to support the trunk instead of the hands of an assistant being applied on the thorax or shoulders, on which parts, according to our method, many turns of the bandage are expended, vide Case I. Various methods have been suggested to retain the portions of the fractured bone, after their reduction. Hippocrates does not appear to have employed any other bandage than what is used in other fractures of the

the humerus; his directions are to fix the arm against the trunk by means of a bandage that will include both; and when the patient wishes to rest it, to have a pillow or thick compresses situated between the ribs and the inferior part of the arm. Celsus employs the spica bandage, and fixes, like Hippocrates, the arm against the trunk. Paulus Egineta followed the same method as Celsus, to which he added the use of a roller expended over the whole arm; a method that Avicenna and many other Arabian physicians appear to have adopted. The greater part of modern practitioners have relinquished the custom pursued by Paré of fixing the arm to the chest. Almost all have rejected the use of the roller as inconvenient or useless. Lamotte, Heister, and Henckel, have adopted the spica. Petit, Duverney, and many others, are contented to apply on the arm and shoulder compresses retained on by the 18 tailed bandage. There are even those who only propose keeping the arm in a sling. We shall not stop to prove the insufficiency of these methods, which at this time are generally admitted. It is evident that the sling and 18 tailed bandage are inadequate to the retention of the fractured portions, and the spica will necessarily push outwards the inferior fragments. The insufficiency of these methods induced M. Moschati to envelope the arm and shoulder in a quantity of tow dipped in the white of an egg, and sustained by a bandage. This dressing, when dry, formed a kind of box, which inclosed the parts over which it was

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applied;\* but this bandage, independent of its inconvenience, forms no opposition to the motions of the shoulder nor to the muscles of the arm, or to the displacement of the fractured portions, which will admit of being moved in every sense, but chiefly inwards, particularly when the arm is extended on a cushion, as M. Moschati recommends.

The dressing employed in the Hôtel Dieu, and which is described in Case I. appears to be the most advantageous. In this last method, the fractured extremity and the trunk, form as it may be said but one body; the arm and the shoulder do not admit of partial motion, which might derange the fragments of the bones; the side of the chest is opposed to their displacement inwards, whilst they receive an additional support from the strong splints situated outwards, forwards, and backwards; the roller that we apply on the arm and shoulder, at the same time that it supports, tends by its pressure to diminish the bulk of the muscles, presses them against the humerus, and certainly takes off from the force of their contraction. This kind of compression produces also another effect, already remarked by Avicenna, that of resolving the swelling and eccymosis. The kind of pad introduced between the side of the arm and the thorax preserves these parts from excoriations, to which they would be subject from immediate contact: it serves also, by its form, to favour the most natural situation of the arm when left at liberty,

\* Voy. Mem. Acad. Chir. tom. iv. in 9to.

which

which is, when the elbow is situated a little distance from the trunk; besides, this disposition retains the inferior part of the fractured portion more exactly in a state of apposition with the superior portion, and destroys that tendency which it naturally has to be carried outwards from the curvature of the humerus, and particularly by the action of the deltoid, which is inserted at its external part. If it should occur, as it has sometimes happened under particular circumstances, that the inferior fragment is carried inwards, we must then change the form of the pad, and make it all of an equal degree of thickness, according to the observation of Mr. Le Dran; and in some cases the upper part should be even thicker, and thinner where it corresponds to the elbow.

Long experience has, however, indisputably established the superiority of this method. All the patients on whom it has been employed have been cured without accident or deformity, and on the average in the space of 26 or 30 days; a few individuals only excepted, whose conduct had been irregular.



*Case of a Wound of the Stomach followed with Effusion  
in the abdominal Cavity.*

[By L. G. T. FOURNIER, Surgeon to the Hôtel Dieu.]

**F** N. Clause, 26 years of age, received a stab with a knife in the epigastric region on the 18th of October, 1790: the blade of this instrument, six inches in length, and from eight to ten lines in width, had divided the cartilage of the 7th of the true ribs on the right side at one inch from its anterior extremity. The wound was an inch in width, oblique in its direction, extending from right to left, from above downwards, and from before backwards. This man was senseless when brought into the Hôtel Dieu, which was two hours after the accident. The persons who accompanied him said, that at the moment it happened he had just left a company where he had eat a plentiful supper, and had got inebriated with brandy and wine; they observed, that the instant he received the stroke, he vomited up the aliment mixed with blood, and afterwards a considerable quantity of pure blood. A similar vomiting returned as soon as he was put to bed. He soon complained of violent thirst, and of pain in the epigastric region: his body was covered with a cold sweat, his pulse small and concentrated, and his respiration quick and difficult. These symptoms,  
conjoined

conjoined with the direction of the wound, and particularly the vomiting of blood, sufficiently indicated an injury of the stomach, From this circumstance he was only permitted to allay his thirst by a few spoonfuls of drink taken at stated periods; a small piece of lint was applied on the wound, and an emollient cataplasm over the whole abdomen, and to the inferior part of the thorax. The patient was laid on his back, and recommended to observe a state of the most absolute rest. In the course of the day he completely recovered his recollection, his pulse beat with more frequency and freedom; his respiration was still difficult. The patient, restless and agitated, complained principally of a sense of uneasiness in the epigastric region. The constant nausea and syncope that now attacked him seemed to announce his approaching death. These symptoms seemed mitigated a little the following night; he was attacked however with some shiverings, and sighed frequently. Towards the morning he seemed to enjoy a tranquil sleep for the space of an hour. The second day the abdomen preserved its natural degree of softness, but the epigastric region was very painful. From the strength of the pulse he was bled to the quantity of six or eight ounces, which operation was repeated in the evening. The thirst was extreme; but the same practice was continued of giving him only a few spoonfuls at a time of the decoction of dog's tooth, acidulated with syrup of lemons; this, with now and then a very small quantity of light soup, formed the whole of his nourishment. The third day, after a



moderate good night, he felt an increase of the pain in the epigastric region, which extended more and more to the left side. Every spoonful of drink, as soon as swallowed, afforded a sensation as if diffused in the cavity of the abdomen: this extraordinary symptom occasioned a little uneasiness, but not amounting to pain. The thirst was more moderate than in the preceding days, the pulse softer, though frequent and raised; from this circumstance, a third bleeding was ordered. From the oblique situation of the wound, and its passage through the cartilage, it was not well adapted to afford issue to a fluid which to all appearance was diffused in the cavity of the abdomen; of course it was unnecessary to lay the patient on his wound. The diffused matters now seemed as if collected in the left hypochondrium; at least there was reason to suppose so, from the sense of weight the patient experienced at the part: he was always easier when laying on his left side, a position which he observed the remainder of the treatment. Until this period, the appearance of the abdomen had been nearly natural; it began to swell the next day, but was not accompanied with any sort of tension. From the difficulty in respiration, the pain in the hypochondrium, the hardness and frequency of the pulse, it became necessary to repeat the bleeding, and which was twice performed on the next day. The sense of thirst now began to abate, the pulse preserved its frequency, but was softer and less elevated; the breathing became easier, but was still impeded by a fixed pain, which occupied the epigastric region and  
the

the left hypochondrium. A kind of bilious purging came on, subsequent to an enema of pure water that was thrown up, with the intention of softening the indurated fæces contained in the rectum: this purging, which was moderate until the 12th day of the disease, increased so as to produce uneasiness. In the course of a few days it disappeared by the use of a decoction of rice with syrup of quinces. Some time after it returned in the same manner as before, and did not cease until the 55th day. During this period the matters were yellow, fluid, and inodorous. After the 16th day nothing passed from the stomach into the abdominal cavity. By the 28th the external wound was nearly cicatrized. At this period, the effusion was circumscribed, and did not extend beyond the epigastric region and the left hypochondrium. Pressure on the other parts of the abdomen produced no pain; the belly was swelled, but uniform; a considerable quantity of effused matters were situated towards the angle of the false ribs of the left side; the pulse was small and frequent. On the 48th day, there was perceived a distinct tumor, instead of this effusion: in its center there was a slight degree of fluctuation, the rest was hard and tense; the pain was constant throughout its whole mass, and became pulsatory at intervals; the fluctuation began to extend, and swelled more and more; the integuments became slightly inflamed, and grew thin towards the cartilages of the last ribs, where the tumor seemed to point.



When the purging had subsided, some solid aliment was allowed, and from this time he began to regain his strength. The 83d day of the disease appeared the favourable moment for an operation to procure the discharge of the matters collected in this tumor. Mr. Deault made an opening in the middle part, in the direction of the fibres of the external oblique muscle : the incision was two inches in length, and afforded issue to a great quantity of white well conditioned pus, mixed only with some striated blood. A small linen tent was introduced, one end of which was left out of the wound, over which a poultice was applied. The patient, who suffered much before the operation, experienced at present only a smarting sensation, inseparable from a recent wound. In the evening he was allowed some soup. The next day the pulse was freer and less frequent, and three days after was perfectly natural. The linen tent was suppressed the next day, as the lips of the wound were sufficiently separate to admit the discharge of the fluid. The orifice was only covered with a piece of fine linen pierced with small holes, with the intention of permitting the discharge of the pus, and preventing at the same time the admission of the poultice. The cure of the abscess proceeded as usual, and the patient was dismissed the hospital 33 days after the incision, and the 115th after the accident, in the full possession of all his functions. There remained only a small fistulous opening, affording a very small discharge, and which in a few weeks perfectly healed. This man has since enjoyed

enjoyed the same state of health as before the accident.

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*Case of a penetrating Wound with an Injury to the Arch of the Colon.*

[By the same.]

ON the 9th of January, 1791, Charles Morel was wounded by accident with the point of a knife in the left hypochondrium: it passed in to some degree of depth between the two last ribs towards their cartilages, when it was withdrawn by a person witness to the accident. The wound was transverse and ten lines in width, which was about the width of the instrument. A violent hemorrhage immediately succeeded followed by vomiting, by which he discharged the dinner he had just eaten. Two hours afterwards, when he was brought into the Hôtel Dieu, a small quantity of thick black blood was discharged from the wound of the odour of fæces: he experienced considerable nausea, accompanied with excessive thirst. The situation of the wound, and the smell of the fluid discharged, gave rise to a suspicion that the arch of the colon was wounded; a conjecture, the truth of which was fully confirmed by the subsequent



subsequent symptoms. A piece of linen, perforated with small holes, was applied immediately to the surface of the wound, and over this a poultice, covering also the whole abdomen. The patient was laid on the wounded side to favour the discharge, and prevent if possible any collection in the abdominal cavity. A rigid diet was enjoined, with the use of the pectoral decoction, sweetened with syrup of marsh-mallows. In the evening, the remainder of the aliment in the stomach was rejected by vomiting: he passed a tolerable night, in the course of which a greater quantity of blood, retaining a fæcal smell, was discharged than the evening before. The next day, the parts contiguous to the wound were extremely sensible to the touch, the pulse frequent, but neither elevated or hard: he was bled in the morning, which operation, from the strength of the pulse, was repeated in the evening. The abdomen was now tense and painful, and the edges of the wound began to tumify; the discharge found on the poultice was more fluid and fetid than before. The patient, who had had no stools since the accident, in the course of the night discharged by the anus a considerable quantity of fluid mixed with coagula and excrements: these evacuations appeared to afford him some ease; the belly was less painful. The third day, although the swelling had increased in the vicinity of the wound, the skin was hot, the pulse raised and frequent, and the thirst violent. A small quantity of blood oozed from the wound, and which still retained the same odour. A third bleeding produced no sensible effect. On the

the 4th day, the poultice was tinged with a reddish sanies, of a very fetid smell; the pulse natural, but the pain in the head violent. As the patient had not had any evacuation for 24 hours, it was judged proper to throw up a clyster: notwithstanding it was administered with the greatest caution, and only half the quantity used that is generally employed, some of it was discharged by the wound. This remedy was, however, followed with three copious stools, composed of thick black blood. From the state of the pulse it was deemed necessary to repeat the bleeding in the evening: the pain in the head subsided, and the patient enjoyed three hours continued sleep. The 6th, the pulse was natural and the belly soft; the edges of the wound, though red, were free from pain, except under the circumstance of strong inspiration. A second enema was given this day, with the same precautions as the first; a considerable part of it was again discharged by the wound, and was followed with stools similar to the preceding. The wound now only furnished a reddish sanies, small in quantity, retaining only a faint fecal smell. On the 7th, the enema that was thrown up again passed out of the wound, but the flatus, which before had passed through this aperture, now took another rout. From this period the fæces alone, unmixed with blood, passed through this aperture. A small quantity of light solid aliment was now allowed. The wound was kept dilated with a doffel of lint to favour the discharge, and to prevent it accumulating under its edges. A firm solid cicatrix now formed,

and



and the patient left the hospital on the 50th day after his admission, without the least inconvenience remaining from the accident.

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*An Extract from Schmucker's Chirurgical Works, translated from the German by G. Reumont.*

# C A S E I.

*A Luxation of the cervical Vertebrae, cured by Mr. Sellin, Army-Surgeon.*

**L**UXATIONS of the vertebrae, from the consequent pressure on the spinal marrow, are attended with peculiar danger, and are generally fatal, unless immediately remedied. A soldier, belonging to a regiment of cavalry, fell off his horse backwards; he remained on the spot without sense or motion. A surgeon was sent for; who, seeing the head tumbling about in an extraordinary manner and in every direction merely by its own weight, contented himself with ordering it to be supported by two of his companions, whilst Mr. Sellin was sent for, who arrived ten minutes afterwards. The face at this time was extremely swelled, and presented the idea of a person strangled;

strangled; the eyes projected from their orbits, the eye-lids were half closed, the mouth gaping, the tongue immoveable, the pulse insensible, and respiration so slow that he made but one inspiration each minute. Mr. Sellin examined the parts with as much attention as the urgency of the occasion would permit; he satisfied himself that there was no fracture of the processus odontoides, but that the vertebræ of the neck were luxated backwards, and that their bodies compressed the spinal marrow. Mr. Sellin desired one assistant to raise the head by embracing it on the inferior part with his two hands, whilst another pushed the trunk downwards. A feeble extension was then made, which was gradually increased. When the surgeon thought that it had been kept up for a sufficient time, he pushed the luxated vertebræ into their proper situation: by moving the head, he found it firm in its situation; the neck was rubbed with *volatile spirit*, and the head kept raised by means of a bandage. The patient was made to swallow a small quantity of laudanum. In about five minutes he began to breathe, his respiration became free, the pulse stronger, and he now opened his mouth and eyes. A few more drops of laudanum were now given; and the pulse being freer, he was bled to the quantity only of one ounce; he now began to speak, and signified by his discourse that he was completely ignorant of every circumstance that had passed: he was kept low, and a saponaceous liniment applied to the part. This soldier was able to stand upright at the end of three days, and at the expiration



expiration of eight was completely well and able to return to the service.

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## C A S E II.

*A Luxation of the last Dorsal on the first Lumbar Vertebrae.*

[By Mr. RUDEGER, Surgeon to the King of Prussia's Body Guard.]

A Mousquetaire in Prince Henry's regiment received a violent blow on the back from a wall which fell in whilst he was employed in demolishing it: his head got inclosed, or indeed suspended between two pieces of timber work. From this situation he was with difficulty disengaged; he was already deprived of sense, and breathed with extreme difficulty. As soon as he recovered his recollection, he complained of violent pain in the breast: he was taken home; and on Mr. Rudeger's examination it was found that the last dorsal vertebrae was luxated on the first lumbar, and had passed three fingers breadth beyond its edges: this derangement was situated to the right and backwards. The patient was put to bed

bed and laid on his belly, and extension kept up by means of assistants. The surgeon was able, with great difficulty, to reduce the bones, which were again displaced as soon as the extension was relinquished. Mr. Rudiger desired four men to keep up the extension for several hours, whilst an assistant retained the vertebræ in their position by compressing them with his hands. To these means were substituted thick compresses dipped in camphorated spirit and aq. vegeto. min. on which a small board, supporting a weight of fifty pounds, was placed. A febrifuge potion was ordered to be taken every three hours, an enema to be administered, and the patient to be bled. The next day the weight was taken off, and thick graduated compresses, dipped in the above mentioned liquor, were applied to the part affected; these were retained by means of a tight bandage. In the evening, as the pain had not subsided, and the pulse remained the same, bleeding was prescribed to the quantity of eight ounces. The patient remained extended on his belly for the space of a fortnight, with the superior part of his chest raised higher than the pelvis, with the intention that the bodies of the vertebræ should be brought into more exact apposition. During this time the dressings were renewed every two days, and the compresses wet with the same liquor. On the third day, some blood and purulent matter was discharged with the urine, and on the fourth only pus. As the pulse still remained feverish, two drachms of bark, divided into four doses, were ordered to be taken every day. By the 20th day, the



the patient was able to lay on his back, and towards the end of the 4th week the ligaments had acquired sufficient firmness to retain the vertebræ in their natural situation. The patient was allowed to sit down and to use some slight degree of motion. Some days afterwards, the dressings were left off, and the back only rubbed with camphorated spirit. At the end of six weeks his strength was sufficiently established for him to exercise the trade of a mason as before. This case clearly proves that the spinal marrow and nerves will admit of violent distension without producing a fatal termination.

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*Case of a considerable Emphysema, consequent to a Wound of the Pharynx.*

[By Mr. MOREL, Surgeon to the Hôtel Dieu.]

**N.** JACOBIN received a blow with the button of a fencing foil, which passed obliquely up the right nostril into the lateral and left part of the pharynx: it passed in to such a depth, that his own repeated efforts, joined to those of his opponent, were scarcely sufficient to extract it. On its extraction the pain immediately ceased. From this he conceived it of no moment, and continued to fence for

for some time, afterwards. An hour afterwards he perceived that his neck swelled rapidly, though unattended with pain: he instantly determined to go to the Hôtel Dieu. At this time a considerable emphysema occupied the whole neck, but principally the left side. The whole tumor was covered with a poultice of rice meal boiled in an emollient decoction, rendered resolute by moistening it with the aq. veg. min. The patient was kept to an antiphlogistic regimen, with a relaxing ptisan acidulated with oxymel. From the fulness of the pulse, it was thought proper to bleed him in the evening. The pulse remained the same the next day, when the neck was affected with rather an acute pain; and in the course of the night the emphysema had increased to such a degree as to render respiration and deglutition extremely painful. From these symptoms he was again bled to the quantity of 9 or 10 ounces, which however produced no sensible advantage; the use of the poultice was now omitted, and fomentations with oxycrat substituted in its stead. On the 3d day, the same symptoms subsisted: another bleeding did not afford any relief. The next day he was the same; and independent of the symptoms mentioned, he had obstructions in the primæ viæ; from this circumstance a grain of emetic tartar was added to his ordinary drink, which produced a copious evacuation: from this moment the symptoms rapidly diminished. By the 5th day, the pain in the neck had nearly subsided, the emphysematous swelling considerably less, and respiration and deglutition much easier: the

Vol. II, X foulness



foulness of the tongue, and the bitterness in the mouth, did not subside until the 6th day, when the same medicine was repeated. By the 7th, the emphysema had almost totally disappeared. At this time a hard tumor appeared on the left side of the neck: it was deep seated, and attended with pain, and in the end terminated in an abscess. Eight days afterwards, the pus was discharged by the mouth; the pain now totally ceased, and the patient was perfectly cured after a residence of three weeks in the hospital.

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*Case of a Gun-shot Wound in the Hand, complicated with Luxation of the index and middle Finger.*

[By Mr. BURDEN, Surgeon to the Hôtel Dieu.]

**N**ICOLAS Delaize, 27 years of age, in charging a canon was unfortunate enough to have the cartridge take fire, which burst in his hand. Stunned by the noise and by the powder, which had burnt his eye-lashes, he did not perceive that his hand was wounded until he had got to a house near where the accident happened. The hemorrhage, which was considerable, was stopped, and the patient taken to the hospital of St. Louis. The wound of the hand

hand extended from the superior part of the os pisiforme to the outside of the first phalange of the thumb, and described a curve, whose convexity was turned towards that intervening space which separates the thumb from the index finger. From the middle part of this division there was another wound, which terminated in the space situated between the ring and the middle finger. By separating the edges of this wound the palmar aponeurosis might be seen, as well as the torn ends of the flexor tendons of the indicator and medius muscles; the ligaments which unite the fingers to the second and third bone of the metacarpus were broke, the capsular ligaments opened, and exposed the heads of the same bones, which projected above an inch before the first phalanges of the fingers with which they were luxated. The surgeon in waiting at the hospital, after he had perfectly cleaned the wound, proceeded to the reduction of the luxated fingers in the following manner: he began with the middle finger, which he embraced with one hand; and whilst an assistant kept up a counter-extension on the inferior part of the fore-arm, he preserved the extension on the finger in drawing it, first according to the direction in which it was then situated, then conducting it forwards, whilst he formed a support with the thumb against the second head of the metacarpal bone; the reduction was effected without pain; the reduction of the index finger was completed in the same manner; the wound was dressed with dry lint, retained on by compresses and a bandage drawn moderately tight. In the course of



the night there was a slight hemorrhage, which was stopped by renewing the application of the lint, and by drawing the bandage somewhat tighter. The next day the lint was not even tinged with blood. The whole hand was covered with an emollient poultice, which was rendered slightly resolutive by sprinkling it with aromatic wine; the state of the pulse determined the surgeon to bleed him twice in the course of the day, and to restrict him to a severe diet. The 4th day, the pains became more acute, the swelling increased, and the wound at this time had begun to suppurate; the poultices were still kept moist with the aromatic wine. From the 4th to the 8th day the suppuration became abundant, but sanious and fetid; rotten pieces of cellular substance were detached from the wound, under which red granulations were remarked. On the 15th day, the pains had considerably diminished, the discharge of the pus was less, but improved in quality; it was, however, still fetid, and by pressure it appeared as if discharged from sinusses that communicated with an abscess situated under the palm of the hand. Three weeks after the accident, a crepitus might be heard on moving the first phalange of the index finger on the head of the second bone of the metacarpus; this crepitus was attributed to the articular surfaces being denuded. This remark did not cause any alteration in the manner of dressing. At this period, the swelling had nearly entirely dissipated, the suppuration less abundant, and cicatrization far advanced. At the end of 50 days of this wound, there remained only a fistulous

lous opening situated between the thumb and index finger: this sinus discharged a small quantity of very fluid and sanious pus. On the 78th day, as the fistula remained in the same situation, it was judged expedient to enlarge it by the introduction of some minium; the eschar sloughed off two days afterwards, and exposed a portion of moveable bone; it was extracted with a pair of forceps without any difficulty. This sequestered piece of bone appeared like half the head of the second bone of the metacarpus. Four days after its extraction the fistula was perfectly cured, and when the patient left the hospital there remained no vestige of this complicated wound, except a little rigidity in the joints of those fingers that had been luxated, which will subside by exercise.



*Fistula in Ano treated by Ligature.*

## C A S E I.

*Of a complete Fistula of a small Depth, where the Intestine was not exposed.*

[By Mr. BOUILLAUD, Surgeon to the Hôtel Dieu.]

**P**RUDENCE Hugnet, 32 years of age, had an abscess formed about the verge of the anus subsequent to a laborious labour: it was opened by incision at the Hôtel Dieu, and emollient cataplasms applied to the part; the intestine was not denuded, the hardness and pain soon disappeared, and the supuration diminished to such a degree that the patient believed herself cured, and left the hospital in opposition to Mr. Default's advice. Six months afterwards she was admitted for a complete fistula, the external opening of which was situated in front and to the right, one inch and a half from the margin of the anus; at the part where the skin had been incised, the internal opening was an inch up the rectum. The intestine was not denuded even at this period, but indurations were felt, which occupied the half of its circumference and extended on the buttocks the whole length of the fistula, and much beyond its external opening; the fever and pain at the part subsided by the observance of an antiphlogistic regimen and by the

the use of the poultice, which tended also to increase the suppuration. These indurations were nearly all resolved at the same time; for by the 8th day they only extended some lines along the course of the fistula. This moment appeared favourable for the operation, which was done the same day in the following manner:

The patient being laid on the same side as the fistula, the left thigh slightly bent, and the buttocks separated by an assistant, the surgeon passed the index finger of his left hand up the rectum, and with his right hand introduced the probe (*plate 4, fig. 2*) into the external orifice of the fistula, pushing it gently forward through the internal orifice situated in the gut, pressing it against the finger of his left hand: he then passed the canula (*fig. 3*) on the probe, and by means of the finger in the rectum was enabled to conduct the extremities both of one and the other outwards by the anus; an operation attended with little pain, from the course of the fistulæ, and from the nature of the openings; the surgeon then withdrew the probe, and substituted in its room a leaden thread; he afterwards retracted the canula, leaving the lead to remain in the fistula; he then approached the ends of the lead and introduced them into the canula, (*fig. 9*), which he pushed as high as the external opening of the fistula; he then folded the ends of the leaden thread, each on its distinct side in the fissures  $\times$  (*fig. 10*) of the canula; then cut them off at the length of one line and a half: the contiguous parts were guarded by dossils of lint. This ligature



produced no pain, nor even prevented the patient from walking. No adherence to any particular regimen was observed, nor any other dressing attended to but changing the lint when moistened by the suppuration, &c. The third day the ligature was loosened: it was again tightened in the same manner every three or four days, until the 21st day, when the parts included by the leaden thread were found completely divided: a small fissure only remained, which was kept open for three days by the introduction of lint to prevent the edges uniting before it healed from the bottom. The woman left the hospital perfectly cured five days after the falling off of the ligature.

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## C A S E II.

*Of a complete Fistula of a greater Depth than the preceding.*

[By J. B. J. BOULET, Surgeon to the Hôtel Dieu.]

A WOMAN of the name of Froment, 43 years of age, came to the Hôtel Dieu on the 4th of December, 1789, for a fistula which she had had for six years, and was consequent to an abscess occasioned by a violent contusion. The external orifice very small

small, was situated on the right buttock a little backwards, and one inch from the margin of the anus; the internal orifice, which was larger, was situated two inches and a half up the rectum; the intestine was denuded throughout its whole extent, and the fistula surrounded with indurations; the integuments were undiseased; the discharge of pus was greater from the internal than the external opening. Some hours before the operation the rectum was emptied by an enema. The patient was placed in the same position as the subject of the preceding case, and the probe introduced in the same manner; but as the internal opening was situated too high upward for the canula to be brought outwards without producing violent pain, a different manner was adopted than in the last mentioned case. After the probe was passed up the cavity in the intestine, the surgeon withdrew his finger to introduce in its room the nippers (*fig. 5*) smeared with cerate; he passed them shut for fear of wounding the rectum by the projecting portion *a*, which forms the branch *a b* when the instrument is open; he then allowed the branches to separate by leaving them to the action of the spring *r*. The probe was then pushed into the crevice *f g*, formed by the separation of the branches, and passed as far as the *cul de sac*, *f*; an assistant then introduced the canula, the edges of which, guided by the probe, got situated by the sides of the crevice. The probe, intended only as a guide to the canula, became then useless; the assistant withdrew it to pass in its stead the leaden thread in the canula, which the surgeon took



took care to hold perpendicular to the wide part of the forceps, that it might more easily get engaged in the crevice, and not be stopped by one of its sides. As the leaden thread was only three lines longer than the canula, it was easily perceived by what remained on the outside, that it had passed into the crevice; but however, to ascertain this more perfectly, the assistant drew that part which remained outwards with a slight degree of force, while the surgeon closed the nippers; the resistance evidently proved that the lead was pinched: then after pushing up the forceps some lines to prevent the lead from lacerating the intestine by twisting itself on the edge of the fistulous opening, they were withdrawn; the canula was also withdrawn by the external orifice of the fistula. One of the ends of the leaden thread was also brought out of the anus by the forceps, and the other remained depending from the external orifice, thus inclosing completely the whole of the fistula. The ends were brought parallel to each other, and fixed in the canula in the same manner as in Case I.

Although this fistula was considerably deeper than the preceding, the cure was also quick: the ligature fell off the 25th day; and in this case, as well as in the first patient, there remained a little fissure, which took up 10 days in cicatrizing, because the surgeon's assistant, who was directed to dress him, neglected to introduce lint between the edges, which adhered together before the bottom had healed; it was of course necessary to destroy this premature adhesion to prevent the formation of another fistula.

CASE

## C A S E III.

*An External Fistula with the Intestine denuded.*

[By Mr. M. GUILLIER, Surgeon to the Hôtel Dieu.]

**J** BLADINIER, 30 years of age, came to the Hôtel Dieu on the 17th January, 1791, for a fistula subsequent to an abscess that had been opened six months before with the lapis infernalis. The opening from this fistula was in the left buttock, two fingers breadth from the margin of the anus; there were several sinusses; one of them passed towards the intestine, which was denuded and thinned to the depth of two inches; another of less extent was in the direction of the coccyx, and the skin of which was thin and nearly disorganized. The intestine was not pierced as in the preceding case, and from this circumstance the manner of proceeding was different; the finger was passed up the anus, and the canula passed, by the assistance of the probe, up the fistulous orifice as high as the intestine was denuded; an assistant then passed the trocar into this canula (*fig. 4*), when the surgeon pushed it through, and perforated the intestine. During this time the coats of the denuded intestine were supported by the extremity of the finger, immediately below the part about to be pierced, and by this means the opposite side of the  
gut



gut was prevented from being injured, which otherwise might have occurred; the instrument was then withdrawn and the canula left in the place, and the operation finished in the same manner as in the preceding case. The skin was excised that covered the whole extent of the sinus that was directed backwards: the wound resulting from this operation, though small in extent, was not cicatrized until the 39th day, ten days after the falling off of the ligature and the cure of the fistula.

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#### C A S E IV.

*A complete deep Fistula with the Intestine denuded above the internal Orifice.*

[By M. BOULET.]

**L**OUIS Lecoq, 28 years of age, and of a robust habit, had an extensive abscess on the right side of the margin of the anus, which emptied itself into the intestine. This happened towards the end of the year 1789. Some months afterwards a new abscess formed on the buttock, one inch and a half from the margin of the anus, and which rendered the fistula complete.

complete. This man, who suffered little from this inconvenience, neglected it until the 2d of January, 1791, when he was admitted into the Hôtel Dieu. At this period the intestine was denuded at least three inches above the margin of the anus, one inch higher than the internal orifice of the fistula; the fistula was surrounded with indurations, which extended even on the buttock, three inches above the external orifice, without the skin being affected that covered the part. This last circumstance, conjoined to the depth of the fistula, was one reason for preferring the ligature to every other species of operation; but it was not sufficient to pass the leaden thread through the fistulous openings then existing. There was no reason to hope that the intestine, denuded considerably above the internal orifice, would adhere to the contiguous parts. To accomplish the cure of this fistula, it was then certainly necessary to embrace the whole diseased portion of the rectum in the ligature; in consequence the intestine was pierced at the highest part where it was denuded by means of the canula and trocar, as described in the external fistula, Case III. In the present case, though the trocar was well pointed, it penetrated with difficulty, because the extremity of the finger passed up the rectum could not reach the intestine sufficiently near to keep it well fixed so as to be pierced with the point of the instrument. As soon as this perforation was effected, no other circumstance occurred in the sequel worthy of remark: the leaden thread was passed, laid hold of with the forceps, and drawn out of the anus, with the  
same



same ease and in the same manner as in the preceding cases, Case II. and III.

Lecoq did not keep his bed during the treatment, not even the day of the operation. He experienced only a slight and momentary pain during the time of tightening the ligature. Many indurations on the side of the buttock remained even twenty three days after the operation; they subsided gradually by the process of suppuration. The ligature gently ulcerated through those parts which it comprehended; and although, as usual, it was tightened every three or four days, the section was not complete until the 63d day. This man left the hospital perfectly cured on the 18th of March, 1791, sixty-nine days after the operation.

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## C A S E V.

*A complicated Fistula, extending considerably above the Reach of the Finger.*

**G**ILBERT Sagette, 40 years of age, was afflicted for 10 years with a fistula in ano, originally subsequent to a critical abscess. This patient had constantly neglected his complaint, though from time to time new abscesses were forming. Two large  
tumors

tumors made their appearance about July, 1790, situated at the margin of the anus; he was admitted for this complaint, which prevented him from walking, into one of the hospitals at Paris. The intestine was treated by incision, and the disorganized skin excised; new sinusses formed under the skin, rendering another operation necessary, as useless as the first. Three months after this treatment, the fistula still existed. The case was now esteemed as incurable, and the patient dismissed. This determined him to apply to the Hôtel Dieu, where he was admitted on the 3d of November, 1790. At this period there was a considerable sinus situated on each buttock; the integuments that covered them were for a great extent, thin and disorganized. One of the sinusses communicated with an open fistula situated on the right buttock, one inch and a half from the margin of the anus, and towards its posterior part: this fistula penetrated into the intestine, which was denuded for half of its circumference and for more than four inches up. Indurations and considerable callosities were remarked in the rectum and round the anus, which diminished by the application of poultices, which were continued until the moment of the operation, which was performed on the 9th day after his admission. The patient being laid on his right side, and disposed as in the preceding cases, the surgeon incised the sinus situated on the right side on a hollow sound, as near as possible to the margin of the anus: he laid hold of the disorganized skin with his fingers, and cut it off with one single stroke of the bistoury. The same



same operation was performed for the sinus situated on the opposite side. He then passed up the fistula as high as it was denuded, the probe, then the canula, and in this the point of the trocar; but the intestine could not be pierced without forming a support by means of the wooden gorget (*fig. 1*) instead of fixing it with the finger, which might have been done if the fistula had been less deep. The ligature was made, as in the preceding cases, with a leaden thread, 11 inches in length. The wounds resulting from the excisions were filled with dry lint, covered with compresses, and sustained by a triangular bandage. Suppuration soon took place. The ligature fell off on the 42d day, and left a fissure one inch in depth, which it was necessary to dress for 24 days more, to prevent the premature adhesion of its edges. Cicatrization was not completed until the 90th day, when the patient left the hospital perfectly cured without experiencing the slightest inconvenience from his complaint.

## C A S E VI.

*A complete Double Fistula, with the Intestine denuded considerably above the Reach of the Finger.*

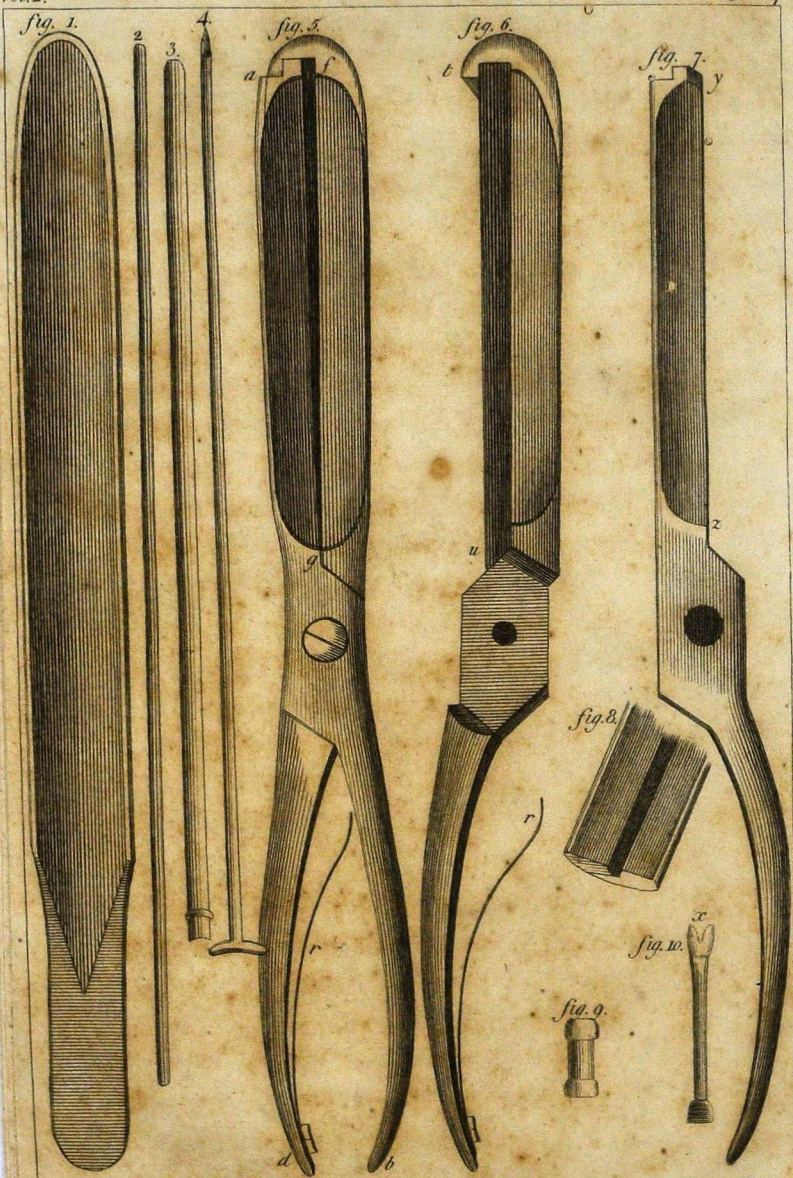
[By Mr. BOULET.]

**H**ENRY Cabouret, 23 years of age, in the year 1786, had an abscess situated on the right buttock, which formed and broke spontaneously near the margin of the anus towards its posterior part, where it remained fistulous. Three years afterwards, in the middle of the summer, 1789, another abscess formed on the left buttock, which opened into the rectum. In the month of October, 1790, another opening was formed at the anterior part of the margin of the anus. At this period the patient was admitted into the Hôtel Dieu. On examination two fistulous openings were found situated externally, about one inch from the margin of the anus; one situated backwards and to the right, the other to the left and forwards. A large opening was discovered in the posterior part of the rectum, situated three inches up; but the probe, when it was passed into either of the external openings, penetrated much higher, and admitted of being pushed in to the length of five inches. The intestine was denuded for two thirds of its circumference, and the probe admitted of being

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moved round the denuded portion without exciting much pain. The patient was feverish and weak from the long and plentiful discharge. Rest, a proper regimen, and poultices, were the only means employed for the five first days, with a view of dissipating the fever and allaying the pain. The 6th, the patient submitted to the operation, for which he was prepared the preceding evening by an enema and by abstaining from all solid food; a second clyster was administered some hours before the operation. The surgeon began with the fistula situated on the left side: the skin which covered it being disorganized by the formation of the last abscess for the extent of two inches, a director was introduced by the fistulous opening, and the sinus laid open; the disorganized parts were cut away as before; the intestine was pierced in the same manner as in the preceding case, and a leaden thread passed 13 inches in length. The same ligature was made on the other fistula, but the skin on the left buttock being perfectly whole was not incised. The intestine being thus pierced on both sides, and comprized for the extent of five inches between two ligatures, one of which was backwards and to the right, and the other forwards and to the left, the patient complained considerably the three first days: there was however no fever; he slept well every night; but the suppuration, which was considerable before the operation, now increased in quantity. By the 4th day, the ligatures were so much relaxed, that it was necessary to shorten them an inch to tighten them as before; they had consequently





quently divided the intestine for the length of half an inch. On the 7th day a purging came on, which yielded to the general remedies employed on these occasions. No other accident occurred during the course of the treatment. The ligature of the right side, which included the oldest fistula, was considerably more relaxed than the other; it fell off on the 46th day, whilst the left remained until the 54th. At this period, and not before, the suppuration began to diminish. After the falling off of the ligatures, the patient was dressed with lint introduced up the anus, which served to separate the edges of the fissures that the leaden thread had left at the margin of the anus: these wounds were cicatrized and the cure completed by the 66th day after the operation.

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#### EXPLANATION OF PLATE IV.

FIG. I. A wooden gorget, used in the incision for fistulæ in ano, concave on one side, convex on the other; the length 7 inches, the width from 7 to 8 lines.

FIG. II. A probe made of gold, silver, or steel, from six inches and an half to seven inches in length, the diameter about two thirds

of a line, the shape cylindrical, without a button; the edges only a little rounded.

FIG. III. A canula of gold or silver, about six inches long and exactly adapted to the probe. The end 3 is finished in the same manner as the extremity of a canula for a trocar.

FIG. IV. A trocar of gold or steel, of the same size as the probe, and exactly adapted to the canula, which it exceeds in length by its point.

FIG. V. A pair of nippers, made either of silver, steel or copper; their use is to draw the lead out of the intestine; the length seven inches, and the width of each of the branches about six lines; *a f g*, a gutter formed by the re-union of the branches, cut in a sloping direction for their whole length; *f g*, a crevice one line and a half in depth, formed by the separation of the branches, and intended to receive the end of the probe and of the ligature; the extremity of the crevice, *f*, is not quite a line in depth, consequently it will not admit the end of the canula—*a b*, the male branch, *f d*, the female branch, separately shewn in Fig. VI. and VII.—*r*, the spring separating the branches.

FIG.



FIG. VI. The female branch of the nippers—*t*, that part of the instrument forming a kind of *cul de sac*, to retain the other branch; *tu*, the blunt part, covering and exactly adapting itself to the convexity of the male branch, covering the whole crevice when the nippers are opened.

FIG. VII. The male branch terminating in the prolongation *y*, intended to be received in the *cul de sac t*, which terminates the female branch; this prolongation is lesser in width than the *cul de sac* throughout the whole extent of the opening of the nippers; *yz*, the edge of the instrument, furnished with furrows, as well as the correspondent side of the female branch, contrived to retain the lead.

FIG. VIII. Section of the nippers to shew the covering portion.

FIG. IX. A canula of gold or silver, flat, five or six lines in length, two in width, intended for the tightening of the ligature.

FIG. X. A similar canula, but longer, to shew the notch *x*, intended to receive and fix the extremities of the leaden thread; the ends of these canulas should be blunt, that the ligatures may not be cut.

## REFLECTIONS.

We shall not enter into the history of the treatment of the fistula in ano, nor do we propose an exclusive mode of cure. Every able practitioner knows, that although the ligature will succeed in a number of cases, there are also particular circumstances which indicate the use of the instrument with the cutting edge. To explain clearly the action of our instruments, we have entered into a very minute detail. We shall just take a cursory view of the principal means hitherto employed for the cure of fistulæ in ano, by which means the reader will be enabled to judge which is entitled to the preference. The application of the ligature was in use at the time of Hippocrates, who describes the operation with his usual accuracy: his plan, in some particulars, is preferable to any since employed; he used five very fine flax threads twisted together on horse hair; this ligature was then passed up the fistula by means of a tin probe, with an eye at its extremity; the probe was then pushed up the gut as high as the index finger, which was passed up the rectum; the probe was then bent by means of this finger, and the end of the ligature disengaged and brought out of the anus;\*

\* Ubi vero specillum contigerit digitum, inflexâ summâ specilli parte, initium & ini, quod est in specillo, per digitum adducito: & specillum quidem rursus extrahito. Lib. de Fistulis, tom. iv. de la Collection d'Haller.



the probe was then withdrawn, the ends of the ligature secured by a knot, and tightened every day until the parts were completely divided; if the thread was rotten before the section was completed, a new ligature was passed by means of the horse hair, which was disposed expressly for this purpose, and not, as some authors suppose, to accelerate the section. Celsus describes a species of ligature, but not the same with that of Hippocrates; it is only a ligature on the skin which covered the fistulous orifice near the anus: he employed only the scalpel when the fistula was directed towards the intestine. This author directs an eye probe to be armed with a double or triple thread and passed to the bottom of the fistula; the skin covering the point of the probe is to be incised; the probe then drawn through the new made opening. It is clear that he does not mean a fistula interesting the intestine; there is even some ground to suppose that Celsus rejected every species of operation when the fistula was complete, at least when the internal orifice was situated a certain degree of depth in the rectum, for in these cases he only ordered topical remedies. It is, however, the operation of Celsus, that most authors have taken for their model in the ligature of fistulæ communicating with the rectum, whether complete, or, bounded by the coats of the rectum, deprived at this part of its cellular texture. In the first case, they introduced a probe in the manner of a seton up the external opening, penetrated the rectum and withdrew it outwards by means of the finger. The probe was generally made of silver;

some practitioners preferred lead from its greater degree of flexibility. When the fistula did not penetrate into the rectum, the thin coats of this intestine were pressed with considerable force by the probe; this was necessarily attended with extreme pain; for which reasons these probes have since been made blunt; some practitioners have sharpened the point by giving it a cutting edge, but it was subject to the inconvenience of wounding the neighbouring parts; to obviate this difficulty, Fabricius ab Aquapendente proposed to fix a small ball of wax on the end of the instrument. Paré suggested an instrument much more convenient and certain in its effect; this is a canula, which is to be carried against the intestine, which is to be pierced by a needle (whose point was in the form of a lancet) introduced up the canula; the needle and canula were then withdrawn, and the leaden probe passed, as in the complete fistula. By this procedure the surgeon incurred no risque of wounding his finger, which might easily have happened by retracting and bending a pointed instrument in the cavity of the rectum; but on the other hand we are to consider, that after the canula is withdrawn some difficulty may occur in finding the new made opening, particularly if the coats of the intestine are denuded to any great extent. The introduction of the canula itself, from the extent of its surface, must necessarily be difficult, unless it is passed upon the probe, which Paré does not mention.

Such are the instruments that have been suggested for passing the ligature, to which may be added the

*bec*



*bec a corbin* with which Girault brought the extremity of the probe out of the anus, and the instrument contrived by Foubert to carry a metallic thread in the fistulous sinus. It is unnecessary to remark how difficult it is to conduct the probe through the rectum when the fistula was a little high up, and the pain necessarily attendant on bending a metallic instrument on the edge of the fistulous opening, even if it was made of tin, as some authors have proposed; there is danger also of injuring the coats of the intestine. With respect to the composition of the ligature, several flax or hempen threads were twisted together, or mixed with horse hair, according to Paré's manner: some practitioners prefer silk, as being less subject to rot. Almost all authors recommend this ligature to be secured by a knot, in the same way as mentioned by Hippocrates. Fabricius Aquapendente rolled it on a small cylinder of wood. Riolan suggested a kind of axle-tree, very complicated in its construction; and Girault his fistular instrument, which was nothing more than a ring, on which the ends of the ligature were secured by a knot; this was inclosed in a case, with a hole at one of the ends for the passage of the ligature.\* Foubert employed lead drawn to a fine thread, united their ends, and twisted them together; this kind of ligature has the advantage of producing less pain, but is apt to break and is subject to other inconveniences. From the plan adopted in the Hôtel Dieu, the pain is spared, which

\* Voyez la Chir. Franc. de Dalechamps, Paris, 1610.

is inseparable to the other methods; it is besides a much easier operation: the ligature may be laid hold of, even when situated very high up, with the nippers, without any danger of wounding the rectum, consequently fistulæ may be cured by this method situated higher than the reach of the finger, which until now have been viewed by practitioners as incurable.\* It is unnecessary to insist on the advantages derived from the canula: it enables us to introduce and direct the leaden thread, and to pierce the intestine with safety and certainty by means of the trocar. We should remark, that by tightening the ligature with the small canula, on which the ends of the leaden probe are bent, the acute pain necessarily incident to twisting is prevented; the lead by this means is not subject to be stretched or broken; it can be also tightened at will and to any determinate degree, and there is never a necessity to finish the section by the bistoury.

We shall finish this article by this important remark, that the treatment of fistulæ in ano by ligature, practised in the manner we have directed, does not last longer than by incision, but is frequently of shorter duration; and that during the time occupied in the cure, the patient is not obliged to keep his bed, nor is exposed to such an abundant suppuration as when it is performed by incision.

\* Voyez *Bertrandi Traite d'Operations* Acrell *Chirurgische Vorfalle* apud Richter *Chir. Bib.* tom. iv. p. 467, *Bell's System of Surgery*, vol. ii, ch. 20, p. 305.



*Case of a Gun-shot Wound with a Fracture of the left Femur.*

ON the 28th of February, 1791, Louis Waymet, one of the national Gensdarmes, received a shot from a gun on the superior part and on the outside of the thigh. At the time he was wounded he was on horse back on his way to join his regiment. The ball passed through both thighs, and fractured the left. To avoid the fury of the populace, he galloped off to the distance of above two hundred paces from the place where he received the wound. At this place he was stopped and pulled off his horse by a butcher, who conveyed him without any precaution to a neighbouring house, where he remained from noon until 11 o'clock in the evening; at this time he was sent to the Hôtel Dieu. Notwithstanding the application of retentive means, the fractured thigh was more than four inches shorter; the inferior fragment, thrown outwards, formed a considerable projection; a round aperture was remarked, situated four fingers breadth below the trochanter major; this was occasioned by the entrance of the ball, which, after fracturing the femur, and traversing the thigh, had passed out at its superior and internal part near the origin of the scrotum, which it had divided without injuring the testicles; from thence it had penetrated the right thigh, towards the superior attachment of the first of the adductors, traversing it in part, and passing before the femur without

without fracturing it, and making its exit two fingers breadth below the trochanter major.

The patient experienced the most excruciating pain, particularly in the fractured thigh, which was already considerably swelled. After conveniently arranging the bed and dressings, the trunk was fixed by assistants, and a counter extension kept upon the pelvis and under the axilla, whilst a considerable extension was made on the foot by a strong assistant. Mr. De-fault then occupied himself in the reduction, by pushing the inferior fragment inwards, and conducting outwards the superior fragment; this reduction was not attended with much difficulty: the surgeon then attempted to examine the course of the ball by means of a probe, with the intention of passing a seton, but the direction of the wound was so altered by the swelling and other circumstances that all endeavours to pass it proved ineffectual; it was not deemed eligible practice to enlarge the wound at the entrance or at the exit of the ball.\*

Dry lint and a bandage were only applied to these parts, and kept constantly moist with the aq. veg. min. To maintain the limb in a state of constant extension, recourse was had to the counter extension on the chest, kept up by means of a body-bandage, and bands fixed to the head of the bed. The wounds of the superior and internal part of the thigh, rendered every means of keeping up a counter

\* The general practice of incisions in cases of this nature has been relinquished in the Hôtel Dieu from experience of its ill success.



extension on the inferior part of the body impracticable. The surgeon easily succeeded in passing a seton in the course of the ball in the right thigh : the parts where it entered and passed out were dressed in the same manner as the other. When the wounds were dressed, and the fracture reduced, the pain subsided ; he passed the rest of the night easily, and slept for some hours. The next day, from the state of the pulse, he was bled twice, and kept on a rigid diet. A ptisan was ordered of the decoction of dog's tooth, with one ounce and a half of oxymel to each pint. The lint and compresses which covered the wounds were tinged with blood ; these were removed, and renewed in the evening. The night was calm. The third day there was little fever ; the compresses were tinged with a bloody fluid, which from its smell announced a speedy suppuration. It was established by the 5th ; the same dressing and regimen were persevered in. By the 6th, an abscess appeared to have been formed at the fractured thigh, below where the ball had entered and situated between the trochanter major and the superior spinous process of the ilium. The dressings for the fracture were now re-applied without producing either pain or fatigue. On the 8th, suppuration was abundant, and seemed to come from the abscess, which was opened by an incision of about two inches in length, with a view to facilitate its discharge ; a very considerable quantity of bloody, purulent matter issued from the orifice ; the edges were kept separate by lint. On the 9th, some spoonfuls of rice cream were allowed, and the quantity increased ;

the

the following days his sufferings were trifling, and his strength evidently increased, notwithstanding the discharge was abundant. On the 14th, the discharge smelled like rotten cheese; this peculiarity led to no alteration either in the dressing or regimen. The wounds were in a good state, although not enlarged by incision. On the 21st, the patient complained considerably of the fractured thigh: this circumstance was soon explained: he had been imprudent enough to detach the body-bandage passed round the thorax, and which served to keep up a counter extension; the trunk, being no longer sustained by the bandage, slid down towards the foot of the bed, and caused the ends of the fractured portions to ride over each other. The reduction of the fracture, and the application of the dressings, caused the pains to subside; he slept the whole night.

On the 26th, the suppuration began to diminish: he experienced at this time wandering pain; with a sense of cold at different parts of his body. This circumstance seemed to arise from an alteration in the weather, which had suddenly changed from dry and cold to wet and foggy; the windows near his bed had been also imprudently left open by some of the patients. The transpiration was recalled by the application of warm sheets, when these symptoms disappeared. The next day the suppuration was as abundant as before. On the 32d, he seemed progressively to improve: his strength was as great as possibly could be expected after such a serious accident. No regimen was observed; on the contrary, he was indulged with



with every thing he wished. On the 33d, he complained of a sense of numbness in his knee on that side where the thigh was fractured; as this subsided during the dressing, it was probably only owing to the constrained position of the limb. On the 34th, the thigh of the same side increased in size and became painful, without any apparent symptom of inflammation. On the 35th, the pain had diminished in the thigh, but had increased in the knee to such a degree as to deprive him of his rest and sleep. On the 36th, Mr. DeFault, apprehensive that these symptoms were occasioned by the retention of pus in the course of the ball, enlarged the opening of the wound from above downward; a small quantity of pus, mixed with blood, was discharged in consequence of these incisions. The next day the suppuration was more abundant, but it came from the orifice of the abscess, and not from the wound that had been enlarged the preceding evening: the pains in the thigh and knee however disappeared, and the patient slept several hours the following night. On the 37th, a small tumor appeared on the anterior and inferior part of the outside of the thigh; on passing the hand over it, and pressing it lightly, a kind of gurgling noise was heard, similar to what is afforded by agitating water in a bottle. An abscess was supposed to have been formed at this part; a conjecture still farther supported by the fluctuation that appeared on pressing the tumor alternately with the fingers; it appeared to be situated under the skin and the fascia lata; but the division of these parts, affording no discharge, induced

induced the surgeon to prosecute his incision as low down as the femur; still no matter was found. A small quantity of lint was introduced between the lips of the wound, and the dressing continued the same. The noise heard on the first examination probably arose from an emphysematous affection, more sensible to the ear than to the eye or to the touch. From the 37th to the 40th, nothing material occurred. In the night of the 45th, the patient suffered from his fractured thigh. In the morning the discharge was found more abundant. The thigh was observed to have shortened more than an inch: this arose from the relaxation of the bands contrived to keep up a permanent extension, which produced a displacement of the bony portions. By a new reduction, and a more exact application of the dressings, this defect was removed. On the 49th day, by pressure with the hand on the inferior part of the thigh, the same gurgling noise was heard as occurred before; this symptom was now disregarded. The same day the use of the seton was suppressed, which had been passed in the right thigh, and which had been renewed every dressing. The wound in the thigh was nearly entirely cicatrized, and the suppuration diminished. A single thread was passed in the room of a seton, that this last might the more easily be applied in case of necessity; this thread was withdrawn six days afterwards, and the next day the cicatrix appeared complete. The wound in the scrotum was at this time perfectly cured. The abscess which had been opened in the fractured thigh a few days after the accident, furnished



furnished constantly a considerable discharge ; however, this opening, notwithstanding the introduction of small pieces of fine lint, daily contracted ; from neglect of regimen, and intemperance on the part of the patient the suppuration was often abundant, and the pus fetid ; this was remedied by attention to diet.

On the 54th day, a new abscess formed on the anterior and inferior part of the left thigh, a little lower and more outward than the part where the gurgling had been heard ; it was opened, and a considerable quantity of well conditioned pus discharged. Six days after this operation, there was scarcely any discharge from the last abscess, but it became more abundant in that which was situated towards the crista of the ilium, where it had diminished for some preceding days. On the 60th day of the disease another abscess began to form on the outside of the ham, and on the 63d it broke, and discharged a quantity of pus ; from this time the discharge from the other wound was much less ; no lint was introduced as in the opening of the first abscess. The callus of the fracture gradually grew firmer. Until this time the body-bandage was worn to keep up the counter extension ; but as the wounds at the scrotum and at the inferior part of the thigh were now well, they permitted this counter extension to be kept up from the lower part of the body by means of a bandage placed under the thigh, (termed *bande en sous cuisse*), with the addition of a splint on the outside, as described in the first volume of the Journal. By this method the patient

found himself easier, and the limb fixed more firmly. All the parts were cicatrized by the 88th day, when an erysipelatous affection appeared on the leg and foot; it disappeared in four days by the use of emetic drinks, assisted by diet. On the 83d day, a purging took place; a drachm of diascordium was given every day for seven days, with the addition of decoction of rice and syrup of quinces. Fifteen grains of ipecacuanha were prescribed, which procured an abundant evacuation of fæces; by the use of this, and a decoction of bark and gum arabic the purging ceased. The patient was so extremely weak, that his life was thought to be in danger: particular attention was of course paid to support him. The callus however grew firmer, and by the 103d day had attained such a degree, that dressings were thought unnecessary; but the following night, as they were raising him on the bed pan, and moving the fractured thigh without any precaution, he felt an acute pain at the part where the callus was situated. This pain, not subsiding by rest, rendered the re-application of the dressings for the fracture necessary, which was done the next day: he was greatly eased by their application, although the pain was not completely removed. On the 115th, as the thigh seemed disposed to incurvate outwards, two small wooden splints were applied to its sides between the compresses and bandage.

From the 115th to the 145th day nothing extraordinary occurred. The patient, who was intractable, often deranged the dressings, and had frequent purgings,



purgings, occasioned by irregularities in his diet. The fracture being again consolidated, the dressings were left off. This thigh was as long as the opposite one, and united without any deformity. The patient kept his bed five days more, during which time he executed the different motions of the limb in every direction. He got up on the 160th day after the accident; at first the joints were rigid and stiff; this inconvenience subsided by exercise. He left the hospital 173 days after his admission; he then began to walk with tolerable ease and used only one crutch. Since his dismissal, he has frequently returned to the Hôtel Dieu; he walks well, and the number of the cicatrices are the only vestiges of the accident.

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*Case of Ascites complicated with Anasarca, cured after the Operation of Paracentesis had been performed two and thirty Times.*

[By Mr. VIELLE, Surgeon at Bohaim.]

— **A**SSELIN, a woman 59 years of age, was attacked with a pleurisy in the beginning of July, 1788; she was treated by hot stimulating remedies, such as aromatic wine and drastic purges prepared in brandy. The excellence of her constitution

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tution saved her from falling a victim to this treatment; she became dropfical a little time afterwards. Mr. Vielle, when called in to tap her on the 25<sup>th</sup> of the following December, found the cavity of the abdomen distended by a fluid, which seemed also diffused in the cellular substance; the respiration was also extremely difficult. Ten quarts of a very limpid fluid were drawn off by the canula of the trocar. For five weeks the puncture was repeated every eight days, and each time an additional quantity was discharged, the leucophlegmatic disposition diminished, and the secretion of urine began to be established. Mr. Vielle was able to examine the state of the viscera through the parieties of the abdomen. By the most accurate examination he could only discover a slight enlargement of the liver. Soap pills and cream of tartar were prescribed, and a ferruginous water, lowered with one fourth part of white wine, was ordered as a common drink. The effusion in the cellular substance had now nearly subsided, but returned in proportion as the abdomen filled; and when Mr. Vielle was again called, which was 12 days afterwards, the difficulty of respiration was considerable enough to endanger suffocation; the pulse, at this time almost insensible, was raised immediately after the fluid was evacuated from the cavity of the abdomen; respiration became freer, and the anasarca completely disappeared. Mr. Vielle, convinced of the importance of preventing the accumulation of the water in the abdominal cavity to that degree as to be diffused in the cellular membrane, in the sequel tapped the patient every



every seven or eight days ; from twenty four to thirty six pints were however evacuated each time. After the 25th puncture, the accumulation of the water progressively decreased, until the 32d time it was performed, which was the last. The secretions now took their ordinary course, after these evacuations and the use of some hydragogue purges ; the patient was afterwards supported by a course of analeptic medicines continued for eight months, when her health was perfectly re-established. Since this period she has not had the least return of her complaint.

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*Case of a strangulated crural Hernia.*

[By Mr. AGASSE, Surgeon at St. Servan.]

MADAME Collet, 65 years of age, of a weak and thin habit of body, experienced a series of symptoms, which the professional men who were called in at first viewed as the effect of a strangulated hernia ; but from the history of her symptoms they were induced to think that the symptoms depended on an involution of the intestine, and that this involution was not produced by the strangulated hernia ; but from the continuance of the symptoms, and the inefficacy of the remedies employed in similar cases,

the surgeon and physician returned to their first opinion. On the 17th day, they prevailed with the patient to permit them to examine the parietes of the abdomen. At this time she confessed she had had a small tumor for the space of thirteen or fourteen years situated towards the left groin, which now could not be returned. She had concealed the circumstance until this period, suffering no sort of inconvenience from its presence. At this time it was about the size of a hen's egg, and was easily known to be strangulated from its appearance. After repeated and ineffectual endeavours to reduce it, the operation was judged indispensable, and Mr. Agasse sent for to perform it. The patient would not consent to it until the next day, when it was performed in the following manner: the patient was laid on a couch, the thigh bent, and the trunk raised by pillows; the surgeon placed himself on her right, and formed a fold of the integuments transverse to the direction of the tumor; one of the extremities of this fold was held by an assistant, the other between the surgeon's left thumb and fore-finger; he then divided it with one stroke of his bistoury, which he held in his right hand, and thus exposed the whole of the tumor. The posterior part of the hernial sac had formed strong adhesions to the contiguous parts: from its thickness and tenfity it would not admit of being laid hold of by the dissecting forceps; the surgeon was consequently obliged to open it at the internal and inferior part with the point of his bistoury; more than ordinary attention was necessary, as no undulation  
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of fluid could be felt between the sac and intestine. The sac was then divided its whole length on a director previously introduced. The strangulated intestine was then exposed; its surface was much inflamed, and its tunics had acquired nearly the same thickness as the hernial sac itself. Another difficulty now presented; the intestine adhered to the sac; and this last formed such strong adhesions to the whole circumference of the ring as to refuse the intervention of the smallest probe; for this reason, Mr. Agasse divided on his nail some fibres of the ligamentum Fallopii, that he might the more readily introduce the director, and accomplish the removal of the strangulation. As these adhesions could not be detached, the reduction of the intestine was not effected; but the surgeons, persuaded that the compressing cause was removed, dressed the wound with a piece of fine linen perforated with small holes, covered with lint, and compresses sustained by a triangular bandage: these dressings were kept moist with a decoction of barley water and honey. A small quantity of broth was allowed, and warm lemonade for a common drink. She slept one hour and a half in the course of the morning. Four hours after the operation the vomiting returned: she was afterwards attacked with colicky pains and vomiting which returned twice. In the course of the day three enemata made of broth were administered. She passed the night tolerably well; but on the next day the symptoms returned with as much violence as before the operation; however, some time after the patient had taken some

glasses of weak whey a small quantity of yellowish matters was discharged by stool similar to what had been rejected by vomiting : they availed themselves of this circumstance by ordering an ounce of manna, which produced no effect. On the 3d day, the symptoms became more alarming, although the intestine was not tightened by the ring, or the abdomen free from tension and pain. At this time suppuration began to take place. On the 4th, from the increase of the hiccups and vomitings, and in fact of all the symptoms, a contraction of the inferior part of the intestine was suspected; from this idea Mr. Agasse conceived that it would be possible to prolong the patient's life, or at least diminish her sufferings, by procuring a discharge of the matters by opening that fold of the intestine included in the wound. Mr. Agasse was of opinion that this step seemed conformable to the endeavours of nature, who sometimes in similar cases forms a new rout by means of gangrene in the intestine, skin, or sac. The surgeons concerned agreed in the propriety of this measure, as under the circumstances no other resource could be derived from art. The fold of the intestine was accordingly divided throughout its whole length without even the patient's perceiving it, although the part was perfectly alive; a small quantity of matter and flatus was discharged. Mr. Agasse, by means of a sound, was fortunate enough to find the superior portion of the intestine, into which he passed a long tent by the assistance of a female sound. The patient received instant ease from the operation, as Mr. Agasse



Agasse had prognosticated: all the symptoms subsided except the hiccups, which continued for some time afterwards. Five hours afterwards the dressings were tinged with a yellow matter, very fluid; and when the tent was withdrawn which had been passed up the posterior portion of the intestine, it spurted out, and seemed combined with a good deal of air; this tent was replaced by another. The patient was at this time extremely well: she had slept from the moment of the operation; the pulse was better, and the intervals between the hiccups considerably longer; she passed the following night well. The next day the dressings had imbibed a considerable quantity of similar matters to what had been discharged the preceding evening. The edges of the wound were dressed with rose ointment. A small quantity of broth and rice cream, with a little wine, was allowed. At ten o'clock in the evening she was free from fever and seemed improved in strength; the evacuations became abundant. During the course of the night she was perfectly tranquil. On the 3d day, the surgeons concerned with Mr. Agasse, seeing her strength so much improved, proposed two ounces of manna to be given, dissolved in whey. The patient took half of this quantity, although Mr. Agasse was extremely averse to the measure. An hour afterwards it produced abundant and continual evacuations; Spanish wine, diascordium, cordials, and powerful astringents were given with the intention of checking it, but without effect. The patient grew instantly weaker, syncope took place  
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without intermission, and in 60 hours after she expired, and on the 5th day subsequent to the opening of the intestine. On opening the abdomen, the jejunum was found dilated to such a degree that its circumference was seven inches and a half: the coats of this intestine were thicker than natural, but not inflamed; it was twisted under a fold of intestine situated nearer the anus, towards the crural arch, to the inferior and internal part of which it was very adherent; from this adherence, as far as the cæcum, the rest of the small intestines were considerably contracted. The large intestines, which had been distended by frequent clysters, were not proportionably contracted. The duodenum had undergone the same change as the jejunum. The stomach was also very much enlarged. From the origin of the duodenum to the crural arch five feet and two inches of the intestine were filled with air mixed with fæces. From the dissection of the crural arch it appeared that the incision had produced a considerable separation, and that consequently the strangulation was removed from the intestine being no longer compressed.



*Case of an Aneurism of the Aorta Descendens,*

[By Mr. E. E. DERRECAGAIX, Surgeon to the Hôtel Dieu.]

**P.** CARDEAU, 44 years of age, experienced in the year 1785 an acute deep-seated pain, situated on the anterior part of the chest, a little above the left breast. This symptom appeared without any assignable cause; and which, joined with fever and difficult respiration, seemed to announce violent inflammation: this was for the time prevented by bleeding. The same symptoms appeared again some time afterwards, and yielded to the same remedy. It was remarked that he obtained more instantaneous relief when the bleeding was copious. Four years passed away in this alternate treatment. Towards the end of the year 1789 he had a more violent access of his symptoms than before; bleeding was not of any use, nor did any advantage seem to be derived from the repetition of this operation; he suffered the most dreadful pains without remission; they seemed to extend as far as the axilla, and were supposed to be produced by some parts being torn in the left cavity of the thorax. The seat of the pain changed on the 8th day: it seemed confined to the space situated between the scapula and the spine. The difficulty of respiration, before considerable,

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now sensibly increased. The patient, after passing 15 days in this alarming situation, was again sufficiently well to return to his ordinary occupations, until the pains again returned between the scapula and the correspondent vertebræ. The pains which before were pungent, now became lancinating: this circumstance led to a more careful examination of the part affected with pain, where a tumor was discovered, two inches in diameter, in which a considerable pulsation was remarked. In a few days it considerably increased, when his pains and inconvenience diminished. He again employed himself in his business, but not for a long continuance: the progress of the tumor, the difficulty of respiration, and a sense of enormous weight in the thorax, compelled him to give up every species of employ. In the month of May, 1791, he was admitted into the Hôtel Dieu. The tumor was of an oval form, of the size of a fist, and extended from one side to the other, from the angles of the third, fourth, and fifth ribs, as far as under the scapula, the posterior edge of which it raised and carried forward. The pulsations, synchronous to those of the arteries, were so strong as to compel the patient when lying on his back to rise and turn to the right. In this disease art could avail nothing; a palliative plan, and a strict regimen were enjoined, and the patient kept in a state of weakness by means of bleeding, which was repeated every time he felt any sense of oppression. The tumor at this time increased more rapidly than ever; a state of rest, with the heat of the bed, seemed to influence its progress;

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the pains now became obstinate; and the bleeding, from which he had before derived advantage, now only enfeebled him, without procuring ease. In the beginning of January, 1792, the tumor occupied a space of eight inches, extending from the second rib below the inferior angle of the scapula; its transverse extent was more than five inches from the transverse apophysis of the vertebræ, as far as under the scapula. The fluctuation, which became every day more sensible, and the redness of the skin towards the center of the tumor, seemed to announce a speedy rupture, which now seemed inevitable; but however this did not occur; he lingered out two months, growing weaker and weaker, with increased difficulty in his respiration, and enjoying no sort of intermission of his pain; he at last sunk under his disease, at the end of ten months after his admission into the hospital, in the fourth year after the appearance of the tumor and in the eighth after the first appearance of the symptoms: he was perfectly sensible to the last moments of his life. Three or four days before his death, the radial artery afforded only a tremulous pulsation. On the opening of the body, a small quantity of blood was found effused under the skin, covering the tumor; the trapezius muscle, the rhomboid, and the serratus minor, were found thin, discolored, and reduced nearly to a membranous state; on raising the scapula, the whole of the posterior part of the tumor was exposed to view: it was found to extend from the vertebræ to the middle part of the ribs, which it entirely covered from the  
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second to the sixth. The middle part of the tumor situated on these ribs was from four to five inches in height. After the aneurismal sac was disengaged from the parts that invested it posteriorly, the thorax was opened, that the anterior part might be examined; the left lung was found wasted from the pressure of the tumor, to which every part but its base had formed adhesions; the heart was larger than in its natural state; the left ventricle and auricle were of an extraordinary degree of thickness; whilst the other cavities were remarkably thin; the right auricle in particular throughout a great part of its extent was only a slight transparent pellicle. The pulmonary artery, and the beginning of the aorta were in their natural state: towards the end of its curvature, immediately below the origin of the subclavian artery and of the canalis arteriosus, a tumor was observed, which seemed contiguous with the coats of the thoracic portion of the aorta, to which it adhered by a kind of pedicle, of about one inch in diameter: this tumor, insensibly enlarged in size, was found situated backwards behind the pleura, occupying the superior third part of the left cavity of the thorax; it afterwards contracted, to pass through the parietes of the thorax, when it enlarged again to form under the skin the external tumor already described. The opening by which a portion of the tumor passed out of the thorax was occasioned by a partial destruction of two inches of the fifth rib; the inferior edge of the fourth rib, and the superior edge of the fifth, were equally destroyed, as well as a part of the bodies  
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of the correspondent vertebræ, with the whole of their transverse processes. What remained of these bones formed a part of the aneurismal pouch, and exposed a polished and worn surface immediately in contact with the coagula. Neither caries or suppuration seemed to exist, but only a thickness of the periosteum. The tumor was prolonged to the right between the bodies of the vertebræ, the aorta, œsophagus, and trachea arteria, which it pushed forward: this prolongation formed a new pouch, three inches in length, in the right cavity of the thorax; it extended from above downward; the transverse width was about two inches and a half, after dividing the curvature of the aorta and the aneurismal tumor; the whole pouch was found filled with coagula of a loose consistence at the lower part, but forward and backward these coagula were disposed in lamina; and in proportion as they approached the surface their solidity increased; towards the middle and posterior part they seemed used and destroyed in the place, which we remarked was ready to burst. The aneurismal sac, communicating with the aorta by an aperture about one inch in size, on the first view appeared as if formed of the tunics of the artery; but on a more attentive examination, it was found that the coats of the artery terminated by a projecting edge situated at the part where the dilatation commenced, and that the cellular texture which composed the sac was lost in the pleura and in the external coat of the aorta; in other respects this vessel had not suffered a  
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great dilatation. Nothing farther was remarked than an extraordinary brittleness of the ribs.

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*Case of a Bubonocèle with Gangrene of the Intestine,  
cured by the Operation.*

**J.** GABRIEL, 48 years of age, had been affected for five years with an inguinal hernia, small in size and easy to reduce, which until this last six months he had retained by means of a bandage, when by neglecting this precaution a larger descent took place; the reduction was difficult, but effected however by a horizontal position assisted with moderate pressure. On the 7th of May, 1791, his attempts to reduce it were followed with pain and nausea: these symptoms were aggravated on persisting in his endeavours; he continued them however for about a week, during which he drank only wine and brandy, which he conceived would remove the disposition to vomiting, that had affected him from the second day. He was admitted into the Hôtel Dieu on the 13th of May: he was put into the bath, and the tumor, as well as the whole abdomen, which was tense and painful, was covered with an emollient poultice. The next day the patient appeared in the greatest danger; he could not however be persuaded to



to submit to the operation, which was represented to him as the only means of saving his life. He was once more put in the bath, where every possible effort was tried, without effect; from this he was induced to consent in the evening to the operation. The tumor at this time was hard and painful, the skin which covered it red and inflamed, and the abdomen tense, through the parietes of which the circumvolutions of the intestines were distinctly marked. On dividing the integuments, the hernial sac was found of an extraordinary degree of thickness, with a bloody and blackish fluid diffused in its substance; its cavity contained a fluid of a reddish colour, and cadaverous odour; the hernia was principally composed of a mass of omentum, bruised and echimosed, anteriorly surrounding a fold of intestine of one inch and a half in length. These parts had contracted adhesions to one another, which were easily destroyed by the finger. The two portions which formed the fold adhered to one another, and to the hernial sac, by a kind of bloody cellular substance. A round eschar, of an inch in diameter, was found on the posterior part of the intestine; its colour cineritious, similar to what is always found in sphacelated intestines. The ring was free, and the strangulation was found to arise from a very tight contraction of the peritoneum, at the origin of the hernial sac. After this was removed by the point of a common bistoury, conducted on a director, the finger was introduced into the cavity of the abdomen, and the intestines round the ring were found slightly to adhere to the

parietes of that cavity, where the inflammation had been certainly very considerable; these adhesions were destroyed, and a considerable portion of the intestine withdrawn from the cavity, which was found inflamed considerably above the ring. The reduction offered no difficulty whatever; the whole of the intestine was returned without any particular caution but to return the sphacelated portions.

All authors recommend the intestine to be retained in similar cases by means of a loop of thread passed through the mesentery. Mr. Default formerly adopted this practice, which is adhered to at present by many practitioners, but he has long since relinquished it, convinced from experience, and particularly from dissection, that the portion which formed the hernia never recedes from the ring, and that there is no reason to apprehend an effusion in the abdominal cavity on the separation of the eschar, as the inflammation will produce an adhesion of the intestine to the neighbouring parts before this separation can be effected. After the return of the intestine, the epiploic mass was left unreduced, and covered with fine linen, the wound dressed in the usual manner, and the dressings retained by a T bandage. In the evening an enema was thrown up, which brought away some bilious matters. The next day he was better, the pulse not so much raised, and the belly less hard and painful. Another clyster produced the same effect. On the 3d day, as the belly was tense and inflated, an ounce of pulp of cassia, with two ounces of manna, dissolved in three pints of water, were prescribed;



scribed; this medicine produced several stools, and diminished in some degree the size of the abdomen. The next day a grain of emetic tartar was added to the same potion, which produced an evident good effect. From this time the abdomen regained its natural state, a small degree of pain remaining only about the ring. The stools were more frequent the following days. The wound followed the ordinary course, and nothing was remarked that seemed to announce an exfoliation of the intestine, which without doubt must have adhered to the contiguous parts, and the eschar have passed off with the other matters along the intestinal canal. The omental mass fell into a state of gangrene, and sloughed off on the 8th day. Slight solid aliment was now allowed, which was gradually increased. The wound was perfectly cicatrized 50 days after the operation. This man has been frequently seen since the operation; and on examination one year after his dismissal, was perfectly free from every inconvenience.

*On the TINEA.*

[By Mr. EVERS, Surgeon at Hanover, communicated by Mr. ROUGEMONT, Professor of Medicine and Surgery.]

**M**R. Evers, in a memoir presented to the Royal Academy of Sciences at Gottingen on the subject of tinea, objects to the mode of treating this disease by means of the pitch plaister : his principal objection is the tearing out of the hair ; a remedy attended with extreme pain, and often worse than the disease. This cruel operation is often repeated three times. This author has twice tried the effects of the powder of burnt toads, (so much boasted of in Florence,) with which he sprinkled the head, previously rubbing it with hog's lard ; this cleansed the skin, but did not influence the cause of the complaints, which appeared again soon after. Persuaded that the dissolution and evacuation of the fluids stagnant on the bulbs of the hairs and in the fatty vesicles would accomplish the cure of this disgusting complaint without the necessity of tearing out the hair, Mr. Evers proceeded in the following manner : After cutting off the hair, the incrustations were softened with nutritum and hog's lard, and removed ; the head was then covered with small slips of thin leather, spread (about one line in thickness) with a solution of gum ammoniacum in vinegar, boiled to the



the consistence of a plaister; the whole was retained on by a cap. At the end of six weeks, the plaister was taken off, and the head found perfectly cured. Mr. Rougemont has three times employed this method, and with the most compleat success.

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NOTE of the EDITOR.

The modern practice in Tinea is to apply pitch plaisters to the head, to leave them on until the hair has grown to some lines in length and gets implanted in the pitch; the hairs are then torn out by taking off the plaister; this operation is repeated three or four times, or even more, until the tinea disappears. Mr. Kuhn employs a plaister of common resin and meal; he dips slips of linen in this plaister, two fingers in width, and applies them warm to the head, previously cutting off the hair; when the plaister is cold, he carefully takes it off, and in such a manner as only to tear out the hairs implanted in the diseased part; the patient was then dressed twice a day with a liniment composed of half an ounce of olive oil and a coffee spoonful of a solution of mercury in nitrous acid, or of nitrated mercury; the patient was then purged with jalap and calomel. Some German practitioners, after softening the crusts with an emollient

ointment or poultice, washed the head with urine, and afterwards applied as hot as possible an ointment composed of half a pound of the powder of juniper berries, and nine ounces of hog's lard, and as much of fresh butter. Others speak much in the praise of camphorated milk. A mixture has been employed composed of two parts of turpentine and one of rose ointment, previously washing the head with an infusion of the *euphorbia sylvatica* Lin in vinegar; red precipitate incorporated with basilicon, and white precipitate with hog's lard have been employed; but the application in most general use has been a solution of fixed alkali in lime water. Mr. Plenck recommends the head to be anointed twice a day for six weeks with a mixture of half an ounce of marsh-mallow ointment to two ounces of ointment of juniper berries and half an ounce of marine acid. Mr. Bell has successfully employed a solution of five grains of cor. sub. to a pint of water. Mr. Stoller cured a case of tinea of 18 years standing by the internal and external use of hemlock. Mr. Stack of Mayence praises the pansy flower (*viola tricolor* Lin.) The general drink employed during the treatment is composed of burdock, patience, and fumitory; *Æthiop's mineral* with sugar and milk is then given. The following pills are much spoken of:

R. Pulv. Scammon } āā g<sup>ra</sup> vj.  
Calomel

Antimon. Diaph. g<sup>ra</sup> xxiv.

Sirop. Chicorei, comp. Rhei q. s. m. f. Massa.

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The following practice, pursued in the Hôtel Dieu, we find attended with the most complete success: a ptisan is prescribed, made of the roots of patience or burdock, sometimes of sasaparilla, in the proportion of one ounce to three pints of water, boiled to two thirds; a pill composed of two grains of calomel, and as much of the sulph. aurat. antimoni, with a sufficient quantity of conserve, to be taken every night and morning; from the first, a poultice is applied, with the intention of softening the incrustations; after persisting in this plan for eight or ten days, the part is bathed with a solution of corrosive sublimate and verdegrease in water, in the proportion of six grains of each to a quart; compresses dipped in this lotion were also frequently applied to the head. This plan is persisted in until the cure is completed, which takes place sooner or later, according to the extent and length of time the disease has existed. In darts affections the same treatment has been attended with equal success. In the winter of the year 1788 to 1789, a little child, eight years of age, had a small ulcer on the leg, which had been unsuccessfully treated for six months, before it was recollected that it had succeeded a darts affection on her thigh which she had for some years; she had never any other complaint. She slept at this time with another child of the same age who had chilblains, but who was in other respects in perfect health; at the end of a month this child was attacked with a kind of tinea, which affected a surface of several inches on the top of the head. They

separated the children, and placed this last mentioned infant in the same bed with a woman about 30 years of age, who had never been afflicted with any disease of the skin: this woman was attacked at the end of a fortnight with darts of affections of the arm and thigh. These three patients were cured by the treatment we have just described.

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*Case of a Commotion of the Spinal Marrow, cured by the Exhibition of an Emetic.*

[By Mr. DERRECAGAIX, Surgeon to the Hôtel Dieu.]

**J**AMES Lacroix, a mason, 36 years of age, fell on his feet from a height about 12 feet: he fell backwards, and for some time was deprived of his recollection. When he recovered his senses, they lifted him up; he was incapable of supporting himself even for an instant; he conceived that all his limbs were broken, and particularly complained of an acute pain in his loins. The buttocks, thighs, and legs, were absolutely insensible and deprived of motion. To these symptoms were added retention of urine and an incapacity of retaining the fæces. In this state he was admitted into the Hôtel Dieu on the 5th of October, 1791, forty-eight hours after



after the accident. To remove the distension, which was considerable, the catheter was instantly passed. As bleeding was not indicated by the state of the pulse, a relaxing drink only was ordered to be taken the next day, in which a grain of emetic tartar was dissolved; this produced copious evacuations by stool, but always involuntary. A little soup was allowed in the evening. After the effect of a second grain given the next day, the patient began to experience a pricking sensation along the inside of the legs and thighs, which parts were perfectly restored to their sensibility by the 5th day. The acute pain in the lumbar region gradually diminished, but the posterior part of the thighs did not regain their sensibility until the end of three weeks, during which time he took every other day an emetic dissolved in the drink. At this period the patient executed all the motions of flexion and extension; he retained and passed his fæces at will; the natural course of his urine was established. From his weakness he was incapable to quit his bed. At the end of the second month he was capable of rising and walking on crutches, and in a few days after could walk with the assistance of a stick; this he could not dispense with even when he left the hospital, which was the 59th day after his admission. A slight degree of weakness only remained, without the least paralytic affection; he possessed the perfect use of his lower extremities.

The treatment of this case was extremely simple: neither bleeding or any particular regimen was ordered; no topical application whatever was employed; and

and the only internal medicine was a decoction of dog's tooth, sweetened with oxymel, which was continued until the end of the treatment. Eleven grains of tartar emetic were taken in the course of the first 24 days.

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# CASES and OBSERVATIONS on the Treatment of the Zona.

[By Mr. DEGUISE, Surgeon to the Hospital of La  
Charité at Charanton.]

## C A S E I.

ON the 1st of December, 1791, James Defrige, 50 years of age, of a bilious temperament, was admitted into the hospital of La Charité for a zona or ring worm, with which he had been affected for 15 days. The disease had begun with a disposition to vomit, accompanied with a general sense of uneasiness, great heat, pain in the head, with difficulty of respiration; these symptoms were succeeded by an erysipelatous redness, accompanied with violent itching in the hypogastric region; this part was soon covered with small pustules, approaching very near to each other; they extended in form of a girdle from  
the



the linea alba as far as the transverse processes of the dorsal vertebræ. The width of this girdle was four fingers breadth. A surgeon was called in, who covered the part affected with a liniment made with the white of an egg and milk. The itching increased immediately after this application, and many vesicles began to form on the part. In this state the patient was admitted into the hospital. The pulse was hard, the mouth bitter, the tongue moist and furred. The first day a weak infusion of elder flowers was ordered for a drink, and compresses dipped in the same liquor were applied to the part. The next day three grains of emetic tartar were prescribed for a vomit: the emetic tartar was dissolved in a pint of water, and taken in three different glasses. The redness and pain sensibly diminished, as soon as this remedy had produced its effect. Two small eschars appeared where the vesicles had been situated, which were dressed with the styrax ointment; they fell off on the 4th day. The ulcers were dressed with cerate. The patient was purged twice, and left the hospital perfectly cured on the 16th day after his admission.

## C A S E II.

**E**DMOND Redan was admitted into the same hospital on the 20th of December, 1791, for a zona furrounding the thorax and nearly as extensive as the preceding case. From his general strength, and the state of his pulse, he was bled in the first instance, vomited the next day, and purged some days afterwards; infusion of elder flowers was employed as in the preceding case; and in ten days he was capable of returning to his ordinary occupations.

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NOTE of the EDITOR.

The zona is a disease extremely common. In this species of erysipelas a bilious disposition in the primæ viæ is particularly remarkable, and consequently the indication can never be equivocal. In the Hôtel Dieu we find this disease generally is cured in four or five days, after the patient has been evacuated once or twice with the emetic tartar, in the dose of a grain dissolved in a pint of water. The external remedy which has appeared to succeed the best, is the application of compresses dipped in the aq. veg. min. When ulcerations exist they are dressed with cerate.

CASE



CASE and OBSERVATIONS *on the Danger of Repellents in cutaneous Diseases.*

[By GABRIEL MOREL, M.D.]

THE history of medicine furnishes numerous examples of the baneful effects of topical applications where acrimonious humours exuding from the skin have been repelled from its surface. The case related by Dr. Morel affords a striking instance of the absurdity of this practice.

M. V. 47 years of age, had accustomed himself for many years to the use of wine and strong liquors: his general health was however good; but the ordinary consequence of this mode of life soon shewed itself in his face, where a considerable pustulous eruption took place. M. V. desirous of getting rid of this inconvenience at any risque, applied to a surgeon, who imprudently prescribed a lotion made with a handful of elder flowers, two drams of flowers of sulphur, as much of camphire, ten drops of spirit of vitriol, and half a pint of vinegar. M. V. had only occasion to employ it eight times, when the eruption totally disappeared. The satisfaction he experienced was of short duration, for he was soon attacked with violent pains in the right hypochondrium, accompanied with continual fever, which increased considerably towards the evening. After a month's attentive treatment,

treatment, M. V. remained still in the same situation. The fever and evening paroxysms, as well as the pain in the liver, continued in their full force; the lower extremities, genital organs, and abdomen, began to swell a fortnight before this period. At this time, the 19th of August, 1790, Dr. Morel was consulted: he found the abdomen tense, with an obvious effusion in its cavity; the region of the liver was extremely sensible; the scrotum and penis swelled, the last to an enormous degree; the prepuce, from being elongated and twisted on itself, obstructed the passage of the urine, and prevented it from passing but a little at a time. The patient experienced a violent sense of thirst, which could not be allayed, joined to a loss of appetite: he told Dr. Morel, that he attributed all these symptoms to the disappearance of the eruption, and that previous to the application of the lotion he had enjoyed an excellent state of health. Dr. Morel, from these circumstances, attributed his present complaints to the metastasis produced, and suspected that the general mass of the blood was affected as well as the liver. A nitrated tisan was prescribed, with aperient apozems; an enema made of the decoction of linseed; unctions with warm olive oil, particularly on the abdomen. The fever, pain, and tension of the abdomen yielded to these methods, which were persisted in until the 22d of August. At this period a purgative was ordered, composed of manna and rhubarb: the good effects of this remedy were decidedly marked; it carried off the fever and the pain in the right hypochondrium. Dr. Morel now directed



directed his attention to the ascites, compounded with anasarca, by endeavouring to augment the secretion of urine, which was nearly suspended, as well as the secretion from the intestines. To the nitrated ptisan and aperient apozems, three doses of a diuretic powder were prescribed, composed of twelve grains of nitre, six grains of squills, and two grains of cinnamon; one of these powders was ordered to be taken previous to each draught of the decoction. This treatment, persisted in from the 23d to the 26th, produced no sensible change, the belly augmented in size, and the swelling of the lower extremities, scrotum, and penis, continued to increase; these parts were fomented with camphorated spirit and lime water. Six ounces of the decoction of broom ashes was ordered to be taken three times a day instead of the above powder: this was persisted in until the 28th. The pain in the right hypochondrium again recurring, one dose of the decoction was omitted, an oily potion with laudanum prescribed, and enemas thrown up morning and evening, made of decoction of linseed. These remedies, continued until the 30th, alleviated the pain without improving the general state of his health. The abdomen, the genitals, and the lower extremities were at this time of a prodigious size. On the morning of the 30th, a hydragogue purge was prescribed, made with five grains of resin of jalap triturated with sweet almonds and oil of tartar per deliquium, and twelve grains of squills, and as much of the root of the *asclepias*: this produced frequent and liquid stools. It was repeated on the

3d and on the 6th of September; it produced always the same effects, without procuring any more than a temporary advantage. M. V. could breathe only when seated on his bed. From this, joined with other uneasy symptoms, Dr. Morel was induced to perform the operation of paracentesis, which was done on the left side, and ten pints of very limpid fluid drawn off. Dr. Morel observes, that in conformity to the opinion of the best practitioners he formed a very unfavourable prognostic. To restore tone to the relaxed integuments and abdominal muscles, fomentations were ordered, with the use of aromatic wine; thick compresses, dipped in the same liquor, were applied to the abdomen, and retained on by a bandage; these dressings were kept on for six days, and in this interval the patient lost by the puncture at least ten pints of water; the abdomen lessened in size after the operation, and the respiration became freer, but the lower extremities were not diminished in size. On the 14th of September, three punctures were made above the maleolus internus; such a considerable quantity of water was evacuated by these apertures, that in four days the swelling of the genitals and of the lower extremities subsided; to restore the tone of the parts a roller was employed, with aromatic fomentations, animated with sal ammoniac. On the day after the puncture, that is on the 8th of September, the patient had taken two doses of the diuretic powder and six ounces of the broom decoction. In the morning he took four ounces of the Chalybeat wine, according to the formula of the  
military



military hospitals;\* these remedies could only be persisted in until the 12th, as he took an insurmountable antipathy to medicine, as well as to every species of aliment except wine, which, taken in small quantities, mixed with a little cinnamon and capillaire, served to keep up his strength; his pulse was small and concentrated, his countenance heavy, and his extremities cold; the belly, though soft, offered no symptoms of effusion in its cavity; the liver was hard and voluminous, but not painful. On the 26th, the copious discharge from the puncture in the ankles stopped; the extremities and indeed the whole body grew colder and colder every day; the pulse tremulous. On the 20th he was attacked with a pissing of blood; this blood seemed intimately blended with the urine, and seemed to come from the vessels of the bladder; the discharge of this bloody urine was attended with insupportable shiverings; an oily potion, with laudanum, was prescribed, together with a decoction of marshmallows. On the 29th of September, a decoction of the root of the *grande consourde*, acidulated with rabel water; this drink moderated the pissing of blood, which continued until his death, that happened on the 4th of October. The next day Dr. Morel examined the body; the abdomen contained about two pints of lemon coloured water; the liver was of a considerable size, hard and shining; its concave surface was livid and of a lead colour; this tinge

\* Steel filings, 4 oz. coarse powder of bark, 2 oz. cloves, one scruple, infused cold for four days in four pints of white wine, to which add two ounces of brandy.

extended through half the thickness of this viscus, and extended along the whole inferior edge of its convex surface to the height of half an inch, where it formed a kind of border. The whole surface had no firmness in its consistence; Dr. Morel conceived it sphacelated. The gall-bladder was increased to three times its natural bulk, and contained a quantity of thick black bile as black as ink; the other viscera appeared undiseased, except the left kidney, which was much larger than the right; the bladder was small and tough; its internal surface seemed inflamed, and presented a number of orifices of dilated vessels, through which the blood must have been discharged that he passed with his urine the last 14 days of his life; by pressure with the finger a small quantity of blood in a dissolved state oozed from their orifices.

This case affords another proof of the bad effects of astringents and repellents, which are too frequently employed in cutaneous diseases, particularly those which affect the face. The metastasis of the humour which constitutes this species of disease, may give origin to complaints proportionably important to the viscera which it may happen to affect. In the above case the humour might perhaps have been invited again to the face if emetics, warm baths, and sudorifics had been employed in the beginning; the face should have been washed with an emollient decoction, then with tincture of cantharides; a sinapism should have been applied to the part.



OBSERVATIONS *on* Calculi *in the* Bladder.

WHEN stones have passed from the kidneys or ureters into the bladder, they frequently get engaged in the urethra, and expelled with the urine. This spontaneous expulsion occurs more frequently in women, from the urethra being shorter, wider, and more distensible than in men. Instances have happened where calculi of the size of a hen's egg have passed through this canal. Stones of the size of a hazel nut have passed the urethra of men; but instances of this nature are so rare, that we can place little reliance on such a fortunate termination. Innumerable cases have occurred where small stones have passed the ureters with little or no pain, and that have never been engaged in the urethra, but have formed nuclei for the formation of calculi of much larger dimensions. The majority of stones found in the bladder have for their nucleus gravel, which has descended from the kidneys, round which new layers of calculous matter are deposited from the urine. Some of these stones originate however in the bladder by the assemblage and deposit of a number of small grains of calculous matter; these have no distinct nucleus. Others owe their origination to some extraneous substance, introduced by accident into the bladder, and thus becoming a center for incrustations. Thus instances of the formation of calculi, have arisen from a nucleus being in the first instance formed by clots of blood,

blood, inspissated mucus, a pin, an ear of corn, a bullet, a tent, a piece of bougie, or sound; and in this hospital a case occurred where the nucleus was found to be a small apple.

There is sometimes great variety respecting the number of calculi found in the bladder. One is however most frequently found, but when they are of a chalky nature, they are more numerous; one, two, three, or even more. Mr. Default has even extracted 200 in an operation he performed on a curate of *Pontoise*. The size of the stones depend on their nature, their number, and on the time the complaint has existed: the longer time the calculus remains in the bladder, the more its size will be increased by new layers of stony concretions; when considerable, they do not admit of such a considerable increase. The stones termed *mural* by Mr. Default are observed never to become very large, but the cretaceous ones are remarked sometimes to increase rapidly in size, and to acquire an enormous size; they have been seen as large as a double fist, and occupy the whole cavity of the bladder, having only a gutter or sulcus in the side to admit of the passage of the urine. Stones in the bladder are not always free and detached: some are embraced very tightly by the coats of this viscus, others are partially engaged in the ureters; they are sometimes fixed in the neck of the bladder, and not unfrequently found lodged in facculi accidentally formed in this viscus. These cysts are of different size: some are small, and exist in a considerable number; some are deeper, and their orifice is remarked

to



to be smaller than their base; they appear formed by a prolongation of the internal coat of the bladder; other facculi are occasionally found, and seem formed from the whole of the tunics of the bladder: these sometimes are of such considerable size that the bladder seems to be divided into two or more cavities nearly equal in size. Stones found in these facculi sometimes present depressions, in which fungi of the bladder have been received; these vascular prolongations have been seen to insinuate themselves in the irregular inequalities on the surface of these stones: When this happens a portion of these fungi are often extracted with the stone; a circumstance that has deceived some practitioners, and led them to suppose that they adhered to the coat of the bladder.

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#### SYMPTOMS *of the Existence of a Stone in the Bladder.*

These may be divided into rational and sensible. Among the first, the commemorative symptoms may lead to a presumption of the existence of a stone in the bladder. The patient should be questioned whether he has had any nephritic symptoms, and whether the pain in the bladder was immediately successive to the cessation of pain in the kidneys, and in the course of the ureters; whether gravel or small stones have passed away with the

urine; or whether there was any hereditary disposition to this disease from being born of calculous parents. The most general decisive symptom of a calculous in the bladder, is a pain in the region of this viscus and in its contiguous parts: sometimes this symptom is wanting; for calculi have existed in the bladder for many years without any inconvenience: but these instances are rare. The pain produced by the stone is not always equally intense, and depends much on its form: if pointed, the pain is more acute than when the surface is polished. These pains are generally relieved by rest, and renewed by motion; and considerably aggravated by exercise on foot, on horseback, or in a carriage: they are generally accompanied with a sense of weight in perinæo, stupor and numbness in the thighs, retraction, and sometimes atrophy of the testicles. The sufferings of some calculous patients are so violent that they are in constant agitation, crossing their thighs, walking with their legs separate, frequently introducing the finger in the rectum, where they think they can feel a hard body, to which they attribute the tenesmus with which they are frequently attacked subsequent to this. Adults, and those in the decline of life, are often inconvenienced by hemorrhages, and children with prolapsus ani. Almost every patient is tormented with involuntary erections; some excite them by friction when they feel an intolerable tickling and itching towards the extremity of the glans; in some there is a slight appearance of phlogosis or increased action at the orifice of the urethra similar to what is met with in gonorrhæa;



hæa; they have an almost incessant desire to make water, which they cannot effect without going to stool; and when they want in the first instance to go to stool, they are alike incapable of holding their water. When the stone is large and unequal, the pain is more acute after the evacuation of the urine, from the coats of the bladder coming in contact with the naked stone, producing irritation and contraction. Sometimes, when the stone is small and slight, it gets situated near the neck of the bladder; and under these circumstances the efforts to urinate are extremely painful, and often unavailing; it often happens for the same mechanical reason that the stream of urine is suddenly interrupted, and flows again when the situation of the calculus is altered by varying the position. Some are even unable to discharge their urine without lying on their back or side. A stone engaged in the neck of the bladder does not always produce retention of urine, as it is sometimes of an angular shape, or has a sulcus in its side, admitting of the passage of the urine. Incontinence of urine is also one of the consequences attendant on the presence of a stone in the bladder: this happens when it is sufficiently large to occupy the whole cavity of the bladder; the urine then being prevented from collecting in any quantity, is discharged as fast as it is secreted, passing through a kind of gutter formed in the sides of the calculus. In some patients the urine is glairy, in others purulent or bloody; the majority discharge blood with their urine, after the slightest degree of exercise.

The sensible proofs of the existence of a calculus

are to be acquired by the introduction of the sound and by passing the finger up the rectum in men, and up the vagina in women. The tumor formed by the stone contained in the bladder when of a moderate size may be distinctly felt at its lower fundus, when the finger is passed up the rectum in men, or up the vagina in women; but when small in size, it is apt to escape our researches. These researches are sometimes impracticable; as in cases of hemorrhoids, or in schirrus and carcinomatous affections of the rectum; but indeed this method of ascertaining this disease cannot be relied on, as a swelled prostate gland, fungi, or any swelling in the tunics of the bladder may afford a similar sensation. Different sorts of sounds have been proposed at various times to ascertain the existence of a stone: those of iron and steel have been employed, as affording a more distinct sound; but the ordinary catheters are entitled to the preference, as they admit the discharge of the urine and allow injections to be thrown into the bladder when deemed necessary. The sound may be either passed laying or standing. In infants the first is preferable. The stone is often felt immediately after the introduction of the sound by those accustomed to the operation. A noise resulting from the shock of the two bodies coming in contact may be sometimes distinctly heard; under these circumstances no doubt can be entertained. Mr. Default observes, that it is difficult to prescribe any certain rules how to manage the staff when in the bladder, so as to ascertain the existence of a stone; sometimes it is difficult to discover, and sometimes it will



will escape the most exact and best directed researches. Practice alone can render a surgeon expert in this operation. There are, however, some remarks, the result of observation and experience. When the stone is not immediately felt, the instrument should be moved gently over every point of the surface of the bladder, and passed in as far as possible; it should then be retracted as far as the neck of this viscus; then again passed in, sometimes depressing the beak towards the fundus of the bladder and sometimes moving it in a contrary sense, and indeed in every possible direction. The sound should at times be slightly agitated, to render the shock of this instrument against the stone more sensible to the feel. If no stone can be felt after an attention to these circumstances, the position of the patient should be varied; he should alternately be sounded on his back and side; sometimes in a standing position, inclining forward or bending backward. By varying the position of the patient in this manner, the stone is often easily discovered. It is preferable to pass the sound when the bladder is distended than when it is empty: in the first case it may be moved with more freedom and is attended with less pain, nor is the stone subject to get entangled in the folds of this viscus. For this reason we have often succeeded in finding a calculus by injecting the bladder, when none could be discovered in its empty state. Sometimes when the bladder is remarkably large, and the stone extremely small, it may be felt more distinctly when it is empty. For these reasons hollow sounds are entitled to the prefer-

preference, as we may evacuate or fill the bladder at pleasure. We cannot be justified in asserting that there is not a stone because we are unable to discover it by our researches, however accurate: our endeavours should be repeated; and we may perhaps succeed the second or third time, when we have been disappointed in our first attempt. Many causes may occur to prevent the discovery of the stone: if small in size it will elude the beak, and if surrounded with glairy mucus, will not afford that sensation that generally results from the collision of the beak with the calculus. The stone may be entangled in the folds of the bladder, or be situated in a cyst or sacculus: the beak may possibly get engaged in the ureter, when it happens to be dilated: in this case it admits of great freedom of motion, and induces the surgeon to suppose that there is not a stone. The bladder sometimes becomes indurated, and affords a similar sensation to a stone when touched by a staff.

Practitioners not much accustomed to the operation may be deceived by the presence of tumors, fungi, polypi, schirrus affections of the uterus, indurated fæces, pessaries in the vagina, &c. These doubts may be removed by the introduction of the finger up the rectum in men, and up the vagina in women. The sound does not serve merely to ascertain the size, figure, and hardness of calculi; in many circumstances it will indicate their number: for instance, when small stones are contained, a kind of clashing noise is afforded by the contact of the sound; there is reason to suppose a stone is small when it disappears  
as



as soon as a little motion is given to the sound; on the contrary there is ground to suspect it large when it is still felt after considerable and extensive motion has been given to the instrument. But on these occasions the practitioner may be subject to error. A very small stone, situated near the neck of the bladder, may give the idea of a large one; from coming in contact with a considerable portion of the surface of the instrument. It is easy to distinguish whether a stone is rough or smooth: in the last case the staff passes over it without any interruption, which is not the case when the stone is pointed and rough. We may judge of the hardness or softness of the calculus, by the sound being obscure or distinct.

The effects brought on consequent to the existence of the stone are equally various: in others its increase in size is very rapid; whilst in some it is so slow that the same stone has been remarked to have augmented very little in the course of several years. The majority of calculus patients are fatigued day and night with the most excruciating pains; they are subject to inflammation, suppuration, and ulceration of the bladder, and which sometimes takes on a horney hardness, and death sooner or later closes the scene. With respect to the use of lythontriptics, their inefficacy and danger are well known. When the stone is too large to pass the urethra, we can only depend on the operation as a radical cure: it may be performed at all ages; for experience shews, that infants of the most tender age, as well as those far advanced in life, are able to support it: it would be prudent

prudent however to omit it in aged patients, if they are not much inconvenienced by its presence; but if the pain and other symptoms should happen to be violent, the age of the patient should not be urged as an objection. Mr. Default has frequently performed the operation with success on persons 80 years of age. With respect to children, it may be performed from two and a half to three years of age. The prognostic depends on the sex, age, size, and form of the calculus, conjoined with other symptoms. It is in general more successful with women than men, and in children than in adults and old men. A sanguineous temperament is more favourable for it than a bilious one. When performed on those scrophulously disposed, it often sets that disease in action.

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*A NOTE relative to the Puncture of the Bladder above  
the Pubis.*

*Extract of a Letter from Mr. Noel, Surgeon in Chief of  
the Hôtel Dieu at Reims.*

**M.** P. a bookseller, who formed the subject of Case IV. page 165, died suddenly of an apoplectic fit, which afforded Mr. Noel the opportunity of verifying the conjecture he had formed, that  
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the bladder, some days after the puncture, had contracted adhesions with the correspondent portion of the internal parietes of the abdomen, and that these kind of adhesions prevent the effusion of urine in similar cases. Mr. Noel opened the body by making a longitudinal incision, extending from the umbilicus to the symphysis pubis, within half an inch of the cicatrix that resulted from the puncture; that portion of the integument opposite to the cicatrix was then divided by a transverse incision, and the bladder exposed, which was found empty and sunk in the pelvis; from this Mr. Noel conceived that he was deceived in his conjecture; still it remained to explain why the urine was not diffused every time the sound was changed, and how it was possible to make these changes without experiencing the least difficulty. Mr. Noel continued the dissection by making another transverse incision a little above the cicatrix: he then observed a true ligamentous substance, from 12 to 15 lines in length, of the size of a crow's quill; this ligament was continued on the external cicatrix, as far as the middle and anterior part of the bladder: on examining this ligamentous substance, Mr. Noel was satisfied of the manner in which it was formed, and its use during the time the patient was obliged to wear the sound.\*

\* Vide Observations on the Puncture of the Bladder by Mr. Noel, page 156 and following; and Case IV. page 164.

*Case of a complete Section of the spinal Marrow, unattended with Paralysis.*

[By J. BOULET, Surgeon to the Hôtel Dieu.]

**J** P. Ripert, 21 years of age, was brought to the Hôtel Dieu on the 10th of August, 1792, for a penetrating gun-shot wound he had received in the chest. This man expired about 26 hours after the accident without experiencing any other symptoms than are generally consequent to a wound of this nature: he passed his urine without difficulty, but was incapable of discharging his fæces; he was in constant agitation, moving the pelvis and lower extremities continually. The body was opened, and the course of the ball traced; it had passed in at the right side of the thorax, before the inferior angle of the scapula; a considerable echimosis took place around the wound; the latissimus dorsi was found pierced below the inferior angle of the scapula, with a considerable quantity of blood under the serratus major anticus, which had been divided a little more forward; the parts that covered were considerably echimosed. The ball had penetrated the thorax between the eighth and ninth rib. The inferior edge of the eighth had been carried off, and the ninth was found fractured: it then appeared to have passed through the inferior lobe of the right lung, which was covered



covered with blood, with which the greatest part of the correspondent cavity of the thorax was nearly filled; the ball then passed across the right side of the body of the tenth dorsal vertebræ, and had completely divided the spinal marrow; from thence it passed into the left cavity of the thorax, which, as well as the right, was filled with blood, and then penetrated the inferior part of the left lung, and passed out between the seventh and eighth rib towards their angle, and was lost under the serratus major anticus and latissimus dorsi, which were found echimosed, as well as those of the right side. The functions of the urinary organs were uninjured, and he had been perfectly capable of moving his lower extremities. In a constant state of agitation, he was perpetually changing sides, sitting on his bed, or drawing up his legs and thighs. A sense of oppression, accompanied with thirst and general uneasiness, were the only symptoms he complained of. In the night he had a momentary attack of delirium: this excepted, he possessed his perfect recollection. The complete section of the spinal marrow at the tenth vertebræ was clear and decided. The fact was demonstrated in public by Mr. Default, who opened the body. What reliance, after this occurrence, can be placed on theoretical systems? Here we find a general proposition, which has even passed into an axiom, absolutely and incontrovertibly contradicted by experience. Facts without number can be adduced to prove, that palsy is generally produced merely by compression of the spinal marrow: how then is it possible to explain  
how

how motion was kept up for 26 hours after the complete section of this important organ? From this curious fact we are justified in concluding that the real principles of the human fabric are but little known, and that, like Hippocrates, we had better adhere to observation and experience than employ our minds in raising systems and explaining theories.

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*Case of Gangrene of the Rectum.*

[By Mr. LARREY, Army Surgeon.]

**J.** MARTIN, a grenadier, 30 years of age, came to the hospital at Sarguemines to be cured of a simple gonorrhæa. The running was yellowish, accompanied with a slight pain and difficulty in making water. At the end of a fortnight he was removed to the hospital at Phalsbourg, where he was treated with every possible attention. The running diminished, became white, the pain in discharging his urine had ceased, and he was on the point of being discharged the hospital to join his regiment, when Mr. Larrey, who was deputed to perform the office of surgeon major, saw him for the first time. This soldier was healthy in appearance, nor had ever complained



plained of any other inconvenience. Under his present circumstances nothing was prescribed but nourishing aliment, and barley water as a drink. On the 13th of July he was ordered to join his regiment, being to all appearance cured; but about five o'clock in the morning he suddenly experienced a desire to vomit, accompanied with colicky pains and a violent head ache. Biliary vomitings now took place; and the whole surface of the body became of a saffron hue. These symptoms were regarded by Mr. Larrey as the effects of indigestion. Aqueous drinks were ordered; which producing no effect, were altered for an oily anti-spasmodic potion, with an acidulated and nitrated ptisan. The pains in the abdomen increased, although towards the evening, the vomiting had subsided; at the same time the other symptoms were aggravated; the fever increased in violence, the pain in the head became more intense, and the surface of the body of a deeper yellow. Blisters were applied to the thighs, and the oily potion repeated with thirty drops of the anodyne tincture. These medicines produced no effect. He was in a continual state of agitation; the urine was bloody and discharged with pain. These fresh symptoms would have directed the use of the bath, but, from some indications of internal gangrene, the pulse became small and intermittent; a cordial potion was ordered. Two hours after its exhibition he fell into a lethargic state, the extremities became cold, the pulse scarcely sensible, the countenance pale and cadaverous, the hiccups frequent, and in short every symptom announced a speedy dissolution.

tion, which took place 30 hours after the first appearance of the symptoms. The body was opened. The stomach was found red and swelled, containing a small quantity of drink. The omentum contracted, inflamed, and extremely small. The small intestines were of a reddish brown for nearly their whole extent, and much distended with flatus. The colon and cæcum were inflamed, nearly empty, and smaller than in general. The liver was swelled and large in size. The spleen nearly natural. The intestinum rectum was found to be the principal seat of the disease. This gut, as high as the sigmoid flexion of the colon, was enlarged to such a degree as to occupy nearly the whole cavity of the pelvis. The mezo rectum was found in a state of gangrene throughout its whole extent, as well as the contiguous parts; the bladder was of a reddish brown, full of a bloody liquor, and internally affected with gangrenous spots. The ureters were black as high as their insertion into the kidneys, where they did not appear to be affected. The os pubis was divided, with the intention of obtaining a better view of the intestine, as the symphysis was found in an ossified state; on laying open this intestine, its cavity was found to be filled with a number of black tumors of an oval shape; these tumors were disposed in a circular direction six inches above the sphincter ani; between these tumors, which resembled hemorrhoids, furrows were situated filled with a yellowish mucus; they seemed to be of a fibrous cellular texture; the gut, in consequence of these swellings, was increased to nearly two inches and a half in thickness, without



without affording any suppuration at any one point; the rectum, and consequently all the tumors, were in a state of complete gangrene. Such was the state of the abdominal viscera.

The same difficulty was experienced in dividing the cartilages of the ribs as in separating the os pubis. The lungs were inflamed, and adhered to the pleura. The top of the left lobe presented a point of gangrenous suppuration. The pericardium was found to contain a quantity of bloody serum. The heart pale, and filled with black fluid blood. Black spots were observed on the surface of the body, similar to scorbutic eruptions. The head was not opened.

Mr. Larrey is of opinion, that the primary cause of this disease of the rectum may be attributed to the venereal virus, but offers no conjectures on the curious circumstance of the ossification of the os pubes and of the cartilages of the ribs.

*Case of a successful Application of the Trepan on the  
superior longitudinal Sinus.*

[By Mr. THIERIOT.]

ON the 17th of March, 1791, a woman of the name of Henrion, 30 years of age, received a violent blow with a fire shovel on the os frontis: it produced a longitudinal fracture on that part of the bone that corresponds to the superior longitudinal sinus. A violent hemorrhage took place from the nose, mouth, and ears, accompanied with loss of recollection. The next day she was attacked with a violent pain on the posterior part of the head, accompanied with a sense of tension about the muscles of the neck; she was also affected with coldness of the extremities, which subsiding gave place to a violent fever. The patient was then visited by Dr. Laurent and Mr. Legrand, surgeon, who were deputed by the tribunal to report her situation: they both accorded in opinion with Mr. Thieriot respecting the nature of the fracture, the necessity for the application of the trepan, and the dangers necessarily attendant on its application to the part in question. The patient was laid on her bed, her head fixed by assistants, and the fracture exposed by means of a crucial incision. The four angles were taken off, and the wound filled with dry lint. Three hours afterwards, the trepan was applied



applied on the most dependent part of the fracture, which was comprized in the crown. Mr. Thieriot observes, that when he had sawed through the bone near the superior longitudinal sinus, he did not lay any stress on that portion of the os frontis which corresponded to this sinus, which he was apprehensive of dividing. To avoid this, the trepan was cautiously moved to right and left, the bone loosened, and removed by means of the lever. Some pointed fragments that remained of the internal table were removed by means of the lenticular. The sulcus in which the sinus was lodged was sufficiently large to admit half a writing pen. The fever and all the symptoms subsided on the eighth day after the symptoms, by means of bleeding and other anti-phlogistic remedies. The wound suppurated kindly, and the patient daily improved until the twentieth day. At this period some symptoms took place, which menaced the life of the patient: she was attacked with violent fever, accompanied with fixed pain at the posterior part of the head; at the same time the urine appeared purulent. A blister was applied to the neck, which produced a considerable suppuration. Half an ounce of the bark was prescribed to be taken every day. These symptoms subsided at the end of eight days; and on the fortieth day after the operation the external table of the cranium exfoliated as large as a crown piece. In two months her cure was complete.

This case may serve, in conjunction with others reported by authors, to prove that the trepan may with safety be applied on the sinuses and even on the sphenoidal

sphenoidal arteries, if proper precautions are observed. Mr. Thieriot is of opinion, that the operation, under these circumstances, would be more likely to be attended with success, if, after the crown of the ordinary trepan had reached the sinus, we were to employ one of a smaller size, not above three lines in width, curved and indented. He recommends the surgeon to use this instrument to finish the section of the bone, by using it in the manner of a writing pen, moving it alternately from side to side, directing it from the vessels; by which precaution there will be little danger of dividing them.