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*To the Editors of the Medical and Physical Journal.*

GENTLEMEN,

SITUATED in an extensive field of practical medicine, I have thought it a duty incumbent upon me to lay, from time to time, before the medical public, such select cases as appeared to be interesting and important. It is from such abodes of complicated disease and misery as Hospitals, that we may expect to derive important information, arising from experimental inquiry; experiments carried into execution after the usual methods have failed. When the new plan succeeds, and snatches from the grave the unhappy sufferer, that is the moment of triumph and exultation to the experimentalist. It unfortunately, however, happens frequently, that the person who makes known the result of such experiments is too sanguine in the cause, and by that very excess of anxiety to profit mankind, defeats his good intentions, by bestowing panegyrics on the recently discovered remedy, in general and indefinite terms, not considering sufficiently the idiosyncrasies of the person to whom it may have been administered.

Naval Hospital, Deal,  
Sept. 28, 1807.

I am, &c.

WILLIAM SHEARLY.

*Two Cases of Fungus Hæmatodes successfully treated by the external Use of Arsenic.*

CASE I. James Fraser was admitted into the hospital in the month of March 1804, labouring under the same disease which Mr. Hey describes in his Surgery, and to which he gives the appellation of Fungus Hæmatodes. This man received a blow upon the middle of the inner belly of the gastrocnemius muscle of the right leg, which was followed by great pain. He went on with his duty for some time, without complaining to the surgeon of the ship. In

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a short time the skin cracked, and a substance resembling coagulated blood rose up. At the time of his admission, it was about 3 inches in length,  $2\frac{1}{2}$  in breadth, and one inch and  $\frac{1}{4}$  elevated beyond the skin. It bled immediately upon applying the sponge to its surface, and that considerably. The patient's general health appeared to be fast declining. Solutions of the following substances, viz. Corrosive sublimate, zinc vitriol, and lunar caustic, were tried without producing any advantage. A thought now struck us, that as the disease was produced in consequence of a blow (although not situated in a glandular part) it might possess something of a cancerous disposition, and as arsenic had been recommended for the cure of cancer, it was proposed to be tried externally after the following formula: R. Arsenic. Alb. in pulv. trit. ℥ij. Spt. Vin. Rect. 3ij. Aq. puræ 3xjv. M. ft. Solutio. The parts were bathed with this night and morning, and dressed with dry lint, over which emollient dressings and a bandage were applied, the latter in such a manner as to make some considerable degree of pressure. The third day after this new method had been tried, a great difference for the better was observed in the fungus's aspect; and in the course of a fortnight this excrescence became level with the surrounding skin, and healthy granulations were perceived shooting over its whole extent. The solution was now omitted. Cicatrization went on rapidly, and the man was perfectly free from this disease in about a fortnight after the application of the arsenic was discontinued.

CASE II. James M'Gregor, æt. 14, was admitted about two months after Frazer's dismissal. This boy was afflicted with the same disease (Fungus Hæmatodes) with these exceptions, that the fungus surrounded the patella, and the tumor did not rise so high as the man's did. This disease was treated in a similar manner as Case 1st, and in a short time the excrescences receded, and the lad was discharged perfectly well.

#### OBSERVATIONS.

Mr. Hey, in his valuable book, mentions the trial he made of several stimulating and caustic substances, which he found to be of no service in this dreadful malady (Fungus Hæmatodes). No internal medicine or external application appeared to arrest its progress, not even the dernier resort of surgery—the knife, as the stump put on the same appearance in a few days after amputation as the disease did prior to the operation. There can be no doubt that the fungus was organised from the tumour bleeding so readily on slightly applying a sponge to its surface. When  
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the disease has proceeded to great lengths, perhaps the internal as well as the external use of arsenic might prove highly advantageous. If the result of the foregoing cases should induce your readers to apply arsenic in this dreadful malady, the result of their experience I trust and hope will be made known.

*Case of Ruptured Aorta near to its Origin.*

THOMAS JONES, boatswain of his Majesty's ship *Thames*, early in the morning of the 24th of October, 1806, was heard to jump out of his hammock; a groan or two was also heard; and on a light being brought, he was found completely dead; his body was covered with perspiration. This man, from the account I received from Mr. James, the surgeon, had been doing his duty with his accustomed alacrity the day before, and appeared in a perfect state of health when he went to bed; indeed, he was never known to complain during the time he was on board the frigate, which was near a twelvemonth.

DISSECTION.

On opening the cavity of the thorax, and slitting open the pericardium, it was found distended with blood, and part of that in a coagulated state. On examining from whence this blood proceeded, the aorta was found ruptured, about an inch from the semilunar valves; this rupture was about half an inch in length. Small particles of calcareous matter were found deposited at the bottom of the three valves, and the corpora sesamoidea Auruntii seemed to be composed in toto of this substance. The coats of the aorta were perfectly sound, as not the least deposition either of ossific or calcareous matter could be detected about the place where the rupture was situated. The abdominal viscera were perfectly healthy.

REMARKS.

This man was very athletic, of a sanguineous temperament, had a short neck, and appeared in every respect a person much disposed to apoplexy. Might not spasm have been the cause of the rupture?

*Case of Ruptured Liver in consequence of a Blow, unaccompanied with any external Marks of Violence.*

JOHN GARRETT, a seaman of his Majesty's ship *Bellefleur*, received a blow which was inflicted by the muzzle of a carronade, on the right hypochondrium. He received this blow immediately after taking a hearty meal. He fell

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down



down on the deck, complained of acute pain in the hypochondriac region, became shortly insensible, and expired about twenty minutes after he first received the blow.

#### DISSECTION.

On an external inspection of the body, no marks of violence presented themselves; but on opening the abdomen, that cavity was distended with blood, and the liver was found ruptured. The rupture run through the right lobe, and extended to the lobulus spigelii, disuniting the gall-bladder partially from its relative situation.

#### REMARKS.

This case, as well as Blannan's,\* points out the great necessity there exists in inspecting bodies who die suddenly, especially if there is any darkness hanging over the affair. I have often seen a coroner and jury perfectly satisfied with a superficial observance of a body under the above mentioned circumstances; and although hints have been thrown out as to the propriety of inspection, they have not been attended to. I am fully persuaded, numerous mysteries might be developed if inspections, under the above circumstances, were more generally adopted. The liver, in consequence of the distended state of the stomach, had the less power of resistance, and therefore received the whole of the shock which produced the rupture.

*Case of Pleuritis accompanied with Carditis, the former terminating in Empyema, the latter in an extensive Deposition of coagulable Lymph, covering the whole Surface of the Heart, and likewise an Effusion of Water within the Cavity of the Pericardium.*

JOHN THOMPSON, æt. 21, of his Majesty's ship Utrecht, of a fair complexion and irritable habit, was admitted into the hospital towards the beginning of the year 1804. Upon his admission he laboured under acute pleurisy, accompanied with decided symptoms of carditis. His pulse was 170, sometimes 180, and intermitted every 4th or 5th stroke. He was attacked with dreadful dyspnœa, attended with watchfulness and violent palpitations of the heart; he had no cessation from pain, referring it chiefly to the left side, and dare not lay in any other position than on his back. He once attempted to lay upon his left side, but the symptoms of suffocation were so severe that it deterred him from ever attempting the like again. To give some

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\* Vid. Blannan's case of ruptured colon, published in the Medical and Physical Journal, for November 1806.



idea what this poor fellow suffered from the violence of the pain, I really think that he did not sleep two hours together during the time he survived. Watchfulness prevailed to such an extent, that if the least noise was made, he would start up suddenly and appear much agitated. Every means was used to reduce and abate the violent symptoms, by abstracting great quantities of blood, joined with the application of perpetual blisters to the chest. Digitalis, opium, and chalybeates were prescribed, but every effort proved ineffectual to make the disease terminate favourably; and in about six weeks after his admission he terminated his existence, having been in a constant state of delirium three days previous to this event.

#### DISSECTION.

Upon opening the cavity of the thorax, a gallon \* of pus was found to be contained in a cavity between the right lung and the ribs; the former had receded towards the left side, at least half a foot. The intercostal muscles of the right side were corroded, and the excavations filled up with layers of coagulable lymph. The pleura pulmonalis was so much thickened that it could very easily be divided into three distinct laminæ, each lamina being of considerable thickness. The pleura which lines the ribs was completely destroyed, and that part of the ribs which was originally invested by this membrane, was covered also with large clots of coagulable lymph, similar to the carnæa columnæ of the heart. The parenchymatous substance of the lungs appeared very healthy. The right lobe of the lungs was so much condensed, in consequence of the pressure made by the vast accumulation of matter, that it appeared about a quarter the size of the left. On opening the pericardium, it was found distended with water, and three pieces of coagulable lymph, as big as pigeons eggs, were found floating loose within. The surface of the heart was covered completely with this substance, (coagulable lymph.) The whole of the viscera contained in the abdomen were perfectly sound.

#### REMARKS.

It appears almost incredible, the patient could have survived the length of time he did under such a vast accumulation of disease, and the latter attacking parts so essential to life. The great anxiety, watchfulness, and intermission of the pulse is easily accounted for, by the appearances

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which

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\* We did not measure this fluid, but I think the quantity exceeded a gallon,



which presented themselves on dissection. This case differs widely from Poney's,\* in regard to the diseased state of the heart, but is similar to it in one respect, viz. there being no organic affection of the lungs. The matter shewed no disposition to point, which rendered the subject so very obscure, that no operation could be performed; even had this been done, and the matter evacuated, the diseased state of the heart alone would have been sufficient to have caused his dissolution.

*To the Editors of the Medical and Physical Journal.*

GENTLEMEN,

**T**HROUGH the medium of your publication, I have taken the liberty of offering a few observations on a subject of no small importance to those who have engaged in the important undertaking of practising medicine.

In every situation of life, whether the activity of trade, or the studious concerns of a profession, engage our attention; whether we are hurried in the bustle of a city, or permitted to follow the more tranquil employments of the country, still we have numberless duties to perform, and to perform in such a manner, as that the *means employed*, and the *ends attained*, shall bear alike unsullied, the eye of the strictest enquirer, and the retrospection of our own hearts.

In all these situations, however, there are constantly temptations to deviate from the line of conduct which reason and conscience dictate, suggesting to us easier means of accomplishing our ends, and speedier methods of gaining the laurels we aspire at. At first view, the *medical profession* might seem exempted from such temptations, but, unfortunately, it is exposed to too many; and still more unfortunate is it, that there are so many practitioners of it, who strive not to resist them. In a profession so noble in its object, so interesting in its exercise, so admirable in its effects, is it not melancholy to think, that its professors should ever degrade it by practising arts, which would be inexcusable even in the darkest ages of ignorance and doubt; yet that this is not more melancholy than true, I appeal to every candid and disinterested gentleman, who has had any opportunity of witnessing the

\* *Videa case of empyema successfully treated*, Medical and Physical Journal, January, 1805.



professional conduct of his medical brethren in a large and populous town.

A Correspondent of yours, in a former Number, has very properly censured "Affectation in Medicine;" he ridicules the sagacious wig, the obedient snuff-box, the knowing stop-watch, the learned phraseology, and the various *tricks* of medical men "*ad captandum*;" but if these little "*ruses de guerre*," in themselves really innocent, be beneath the dignity of the profession, how reprehensible must be the conduct of that man, who endeavours to raise his own reputation, by injuring the fame of another. Yet, how common is such a conduct! Does it not sometimes happen, that a medical man, on being called to attend an individual of a family, whose health is generally intrusted to the care of another, instead of acting upon the principle of "doing as he would be done by," represents the various members of it as having been under hands incompetent to the duties of the profession; says that they look ill, and that a more skilful attendant is necessary for their future health? Or, for instance, a professional gentleman is called in to attend an invalid; he observes a young lady near him, of delicate form and pallid complexion; he requests to feel her pulse; asks her if she ever coughs, has any pain in her side; or experiences difficulty of breathing; and turning to the mother of the family, says, "Madam, your daughter is consumptive: unless immediate measures be had recourse to, she cannot live long." I am aware that in some instances, the most conscientious man might use the language of either of the above instances, (particularly perhaps of the latter, from the increasing prevalence and insidious nature of consumptive complaints); but before he does, before he alarms the peace of a happy family, let him seriously ask his own heart, whether *his interest*, or *their welfare*, most dictates the interference.

There is another *fashionable trick*, which is of so contemptible a nature, that it cannot be too harshly reprobated; it is that of *making the worst* of every case; of painting the consequences of the complaint in the most glaring colours; of magnifying every danger, and of representing the patient as nearly beyond hope of recovery, while the case is by no means so desperate; and all this merely for the purpose of making the cure appear more miraculous. What a sacrifice of principle, for so paltry an end!

When cases of this kind occur, a person who is unacquainted with medicine, and consequently incompetent to judge of the degree of real danger, has, I think, very



fairly a right to argue that the medical attendant has shewn great ignorance of the nature of the disease, from its termination being so contrary to his prediction; it is true, that unexpected recoveries do *sometimes* take place, but such marvellous examples are by no means so common, as these skilful gentlemen would make us believe. I cannot impress too strongly upon the minds of medical men, the extreme *cruelty* and criminality of sporting in the manner which is so often done with the *feelings* of patients and their friends; this indeed I am convinced is a subject not sufficiently attended to by many, whom no unworthy motives actuate in the exercise of their profession; they are not fully aware how badly an unfavourable prognosis will operate upon a tender and irritable mind, and how much the promise of a *probable recovery* inspires confidence in a patient, and makes both him and his friends bear with cheerfulness and resignation the pains and fatigues of a lingering illness.

I have not sketched an ideal picture; of all that has been stated, I have seen repeated instances, and you, Gentlemen, no doubt, have also seen too many, to allow you to consider these observations incorrect, or irrelevant. The *impolicy* of the conduct I have here deprecated, must be obvious to every reflecting mind. Is it to be supposed that these miserable artifices will always succeed? No, the time must necessarily come, when the *miracles* of these men will be exposed, and a deceived public see the tricks which have been practised upon their ignorance and credulity.

As *Medical Men*, we have the most important duties to discharge, both in relation to ourselves and others; and in order to advance the science of medicine; to uphold the dignity of the profession; to promote the welfare of society, and gain the esteem of our own hearts, we must discharge them as *Men*, as *Gentlemen*, and as *Christians*.

I am, &c.

CHIRURGUS.

Bristol, October 1807.

To the Editors of the *Medical and Physical Journal*.  
GENTLEMEN,

YOU did me the favour of inserting in a former part of your Journal, a few loose hints on *Hydrophobia*, which induces me to trouble you with some further observations on the same subject, if you think them worthy of your notice.

It is quite unnecessary to describe the symptoms of *hydro-*



drophobia, or, as it is more properly called, *rabies contagiosa canina*; as these are in general so well known, and so clearly pointed out by most authors who have written on the disease. I pass on, therefore, slightly to touch upon the nature of rabies (for I shall not stop to discuss it at present), whether that it is *inflammatory*, according to Dr. Rush and other respectable American physicians; and which, in some instances, seems to have been countenanced by dissection; or *spasmodic*, according to Dr. Cullen. It is, I believe, the commonly received opinion amongst the best practitioners in this country, that it is a spasmodic disease, accompanied occasionally by inflammatory symptoms, but which do not necessarily belong to it; and in this light I shall consider it here. But it must be observed, that whatever theory of this disease has at any time obtained, and whatever practice, whether corresponding or not, has been adopted, as is confessed by one of the ablest writers on the subject, "no cure has yet been made in any case of true rabies." Hence it is asserted, with great reason, by the same author, "that those diseases resembling, but improperly called, hydrophobia, and which admitted of a cure, arose not from the saliva of a rabid animal, but from apprehension which sometimes excites mania; or resemble those arising from wounds inflicted on nerves, producing irritation, or various degrees of tetanic affection." (Dr. R. Hamilton's Letter on Canine Rabies, in the last number of the Monthly Magazine). And here I cannot help observing, with your able and industrious correspondent Mr. Ward, that Mr. Hicks's case, in your 97th Number, notwithstanding his very candid and elaborate reply, belongs more properly to this description of disease, than to have been one of true rabies.

Rabies is said to be peculiar to the dog and cat kind *only*, and never appears in the human or any other animal, but by communication from theirs (and from no other) in the usual way; or, in other words, by *inoculation*. It is also supposed to be contagious, as the name imports; and, as has been remarked, all other dogs, from natural instinct, avoid the infected one, when he is, in common language, said to be going mad.

Among the remote causes of rabies, are reckoned cold, hunger, dirty feeding, as carrion and the like; and whatever else tends to weaken, or render their bodies irritable.

But I shall leave this part of the subject, and proceed to the discussion of the means that have been most in use, for the prevention, as well as the cure of rabies; and here  
I shall



I shall premise, that as the analogy between this disease and tetanus is so obvious, and now so well established, I shall keep it in view as I go along.

It has long ago been ascertained, that the surest way to prevent rabies, is the excision of the bitten part; and, as if this was not of itself sufficient, keeping the wound open for some time afterwards, by stimulating applications. If, however, the *whole* of the bitten part can be extirpated, without leaving a *single point* behind, which had come in contact with the teeth of the rabid animal, surely the end will be fully answered. Where then is the necessity of increasing and prolonging the patient's sufferings, by keeping him in torture afterwards? But if any thing of this kind must needs be applied by way of further ensuring the patient's safety, I much question if the actual cautery is not the easiest as well as the shortest way of doing it. The practice, at best, is altogether unscientific. To reason from analogy, for it is not a matter of *no importance* to the patient particularly. In making the experiment of trying to prevent small-pox by cutting out the inoculated part, as was done by the late John Hunter, it was never dreamt to be necessary to keep the wound open afterwards, as it succeeded well enough without it; here then the cases are exactly similar. But to return to the subject; when the bitten part cannot be cut out with safety (and when that is the case, it ought not to be attempted, for it cannot possibly do any good, unless the *whole* of it is taken away); we must try to destroy it, by applying *argentum nitratum* to the surface of the wound; or by that or some other means, endeavour to excite such a degree of inflammation in it, as will answer the purpose as effectually. It will be proper, however, in the first place, to lay the bitten part freely open in every direction; so that after washing it well, till the bleeding ceases, and wiping it, we may be able to use the *caustic* with more ease and certainty. Here, however, it may be remarked by the by, that when the wound is very deep, or much lacerated, and cannot be laid open with the freedom that may be necessary, *argentum nitratum* is a very uncertain application; as some on whom it has been used, under such circumstances, have woefully experienced. What strikes me as more likely to answer the purpose as effectually, is a strong solution of muriated mercury poured into the wound, and which would penetrate into *every part* of it, so as to corrode the whole surface of it, and at the same time excite in it a sufficient degree of inflammation. The patient might, at the same time, be directed to take a  
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drachm of bark three or four times a day. Other articles have also been employed with the same intention, such as cantharides, hydrargyrus, ntr. ruber, strong mercurial ointment, &c.; and a respectable writer advises to fill the wound with gunpowder, and set it on fire.

Another means of preventing, or at least of lessening the danger, is "washing the wound *immediately* and perseveringly with water," as recommended by Dr. Wall\* of Oxford, in your 98th Number; and I have no doubt if this could be done the instant the bite is inflicted, but that the poison would be so diluted as to lose its activity entirely, as we know this to happen sometimes to the variolous or the vaccine fluid, when water has been incautiously added, for the purpose of softening it. And I myself have heard persons boast of having escaped venereal infection, by washing with water *immediately* after, when they have known that they deserved it: here the cases are nearly alike. To return, if the water, after thus first washing and cleansing the wound, is poured upon it from a tea-kettle, spouted cup, or the like, till the part is totally benumbed, or in other words, till its *life* or irritability is suspended, which will happen if the process is continued long enough, the end would, in all probability, be answered without farther trouble. However, as the disease to be dreaded is so certainly fatal, few, I believe, would be satisfied with so simple means as this, except with timid people, who will submit to no other. Another way, somewhat similar to this, and of which I have somewhere read, is the *sucking* the wound, according to an ancient practice in armies, when warfare was carried on with poisoned weapons; this, however, like the other, ought only to be preparatory to the employment of means more certainly efficacious.

The only other means of prevention which I have heard of, that is likely to answer the purpose, is a *mercurial* course; and this is supported not only by analogy, in regard to tetanus and syphilis, but has been confirmed by repeated experience; and of which we have another

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\* Whose signature, by mistake, is made to be M. Hall, instead of M. Wall; which lessens the weight of the communication. This Gentleman, who has, for many years, been one of the principal ornaments of the Healing Art in this neighbourhood, is not more admired for his extensive practical knowledge, than for his very liberal and gentlemanlike conduct towards such of his professional brethren, as are occasionally associated with him in practice,



striking instance in Number 103 of your Journal, by Dr. Harrison. And here let me remark, by the way, if any of the wonder-working nostrums, that have been so often puffed off as never-failing preventatives, have ever had that effect, it must have been owing to some portion of mercury which they have contained, as we know it to be a copious ingredient in some of the most noted of the kind in our own days.

I come now to the CURE, the most discouraging and almost hopeless part of the task; as that, alas! has been attempted in vain by the ablest men in all ages: I shall, therefore, but briefly touch upon what has been, or may be, done towards it, with any thing like a prospect of succeeding.

Rabies, as it appears in man, is, I believe, sometimes preceded by disagreeable or painful sensations about the bitten part, which is said now to begin to inflame, and break out afresh. I mention this for the purpose of asking, if even at this period something *effectual* could not be done, by *powerfully* inflaming, or otherwise irritating the bitten part. But we are seldom afforded an opportunity of even making the trial, as patients, in these cases, do not always have recourse to medical assistance, until the disease has appeared in all its horrors: then the most prompt and decisive measures *only* are likely to avail us any thing. Now, all the circumstances of the disease being considered, nothing appears to me better adapted for answering our purpose in the first instance, than the COLD AFFUSION, as suggested by Dr. Fothergill (Number 96); and as it is likely to be the readiest means in our power, it ought to be used without a moment's delay, and repeated as often as may be necessary.

SUBMERSION, which is akin to it, notwithstanding the unfavourable issue of Dr. Harrison's case, is not, in my opinion at least, undeserving of further trial. It is to be regretted that the Doctor and his learned friend, had not had an opportunity of examining the body of their patient after death, as the result might, perhaps, have proved more satisfactory than we might be apt to have concluded.

COLD BATHING, which has been found of service in tetanus, especially when it has been used, as directed by Dr. Currie, may probably have the same good effect in this disease. "The administration of it, is sometimes by bathing the person in the sea; or more frequently by throwing cold water from a *bason* or *bucket* upon the patient's body, and over the whole of it." (Cullen's First Lines, MCCLXXX).

WARM



WARM BATHING, which is but an ambiguous remedy in tetanus, is not likely to be of more benefit in rabies.

MERCURY is the next article in point of importance, and should be used *unsparingly*, both externally and internally, so as to excite a *salivation*, if possible. By this means tetanus has sometimes been cured.

OPIUM naturally presents itself to the mind here: but if we expect to do any good with it, it must be exhibited in much larger doses than we are accustomed to in common practice; and as its effects do not continue long in the system, we should of course repeat it frequently. At the same time I must acknowledge, that I have had frequent opportunities of seeing opium administered in tetanus, and to a very great extent, in every form in which it can be used; but I cannot add, with the effect that might have been expected.

MUSK. In one of the last cases of tetanus, which fell under my own care while in the West-Indies (that of a Negro boy, about 13 years of age), the disease was evidently cut short by musk (conjoined with opium and the volatile alkali), given in a dose of 50 or 60 grains, and repeated every two or three hours.—In rabies it may have a good effect.

DIGITALIS is suggested as worthy of attention at the same time. I had an opportunity of seeing it administered to an American Negro, in the Naval Hospital at Plymouth, with tetanus, by Mr. Fuge, the senior surgeon (to whom I am indebted for several other useful practical hints) and apparently with benefit.

TOBACCO, as an astispasmodic, may be of some service in rabies; and, as it can be administered with equal certainty of producing its effects in form of glyster, as in any other way, it is certainly an argument in its favour, especially if deglutition is either impaired or interrupted; and it has this further recommendation, that it generally proves sudorific at the same time.

ELECTRICITY has long appeared to me a very likely means of being of great use in the treatment of this disease; and as it has, of late, been recommended from a quarter that will bring it into further credit, I need not add, that it ought not to be omitted.

ARSENIC, which is a very powerful sedative, however its good effects in the cure of agues, chronic rheumatism, &c. are to be explained, is also recommended to be used, by the same respectable authority. I shall only observe further respecting it, that I know from my own *personal*



as well as other experience, that such a dose of it as will produce an obvious effect on the constitution (and any article that does not, is certainly inadmissible here), is not free from danger.

BLISTERING has been suggested with some degree of plausibility. It "has been formerly employed in this disease (tetanus); but several practitioners assert, that blisters are constantly hurtful." (*Ibid*, MCCLXXVIII).

OIL is recommended to be used both internally and externally; but on what rational grounds, I am at a loss to conjecture.

BARK and WINE, which have been given with advantage in some cases of tetanus, will, as appears to me, be employed with better effect, when the disease is moderated (if happily that can be effected), than during its violence.

VINEGAR is said to have been given to the extent of two or three pints a day in rabies, but with what effect I have not learned; nor do I know on what authority.

BLOODLETTING, which one would hardly think of in treating a case of rabies, is said by Dr. Rush to have been beneficially employed here; and in robust habits, may do no apparent harm; but, if I may be allowed to judge of its probable effect, from what I have seen to follow its use in tetanus, it will be better omitted. I intended here to have noticed the fondness for *evacuations*, that seems to pervade the American practice of medicine; but having already spun this Letter to a greater length than I expected, I shall now conclude with a hope, that the foregoing observations may not be unworthy the perusal of the junior part of your readers. As to those who have had more experience in the treatment of it than I can boast of, as I have yet so much to learn respecting it myself, I shall be gratified by further communications on the subject—

*Si quid novisti rectius, candidus imperti.*

But after all our speculating (for it can hardly be called experience), upon a cure in this most melancholy of all diseases, I must acknowledge that the prospect is not very flattering.

I am, &c.

A. HUGGAN, M.D.

Wallingford, October 10, 1807.

*Addenda*



*Addenda to Mr. Freake's Paper on the Humulus Lupulus.*

WHEN I had for more than four years prescribed the *Humulus Lupulus* of Linnæus, with apparent advantage in several cases of Gout, and other disorders, particularly during the continuance, and after the influenza of 1803, and found that it possessed very valuable properties, I published my first account of its virtues in the Medical and Physical Journal for May, 1805, with the hope that practitioners might be induced to try the medicine, and that under their direction it would be found to produce similar effects.

From this time I continued to make observations respecting the powers of this vegetable, when any fair opportunity offered, and seldom a week passed without affording some additional proof to confirm my opinion of the utility of the medicine. I became anxious that my observations should be beneficially extended, and for that purpose I collected the opinions of several authors, which, with observations, chemical experiments, (both from the green and the dried flowers) and the addition of eight cases, I formed into a pamphlet, which was printed in May, 1806, and entered at Stationers' Hall; yet I did not allow any of this edition to be sold, for it was my wish that the preparations should be sanctioned by the College of Physicians before they were given to the public. This pamphlet was therefore intended solely for the use of professional gentlemen.

Several physicians prescribed the *Lupulus* with beneficial effect, though only four favoured me with their opinions for publication, which with the two additional cases, No. 9, and 10, (certainly of considerable importance\*), and some remarks, and directions, comprized the second edition, in which, for the reason before assigned, the chemical experiments were omitted.

I think it proper to notice, that whenever I had opportunity of enquiring, I found that the people employed during the process of collecting and preparing the Hops for sale, had good appetites, slept well, and were remarkably healthy; this circumstance will probably be admitted as

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\* The latter is now rendered more so, on account of the patient having had another violent attack in July last, when the *Lupulus* was again taken, and he was once more restored by it to a good state of health.



an additional proof to strengthen my opinion of the value of the medicine.

I shall now offer my best acknowledgments to the Editors of the different Reviews, who have thought proper to notice these pamphlets, for the handsome manner in which they have generally spoken of them, and request they will accept such acknowledgment as a token of my ardent desire to promote public good.

I shall thankfully receive any friendly hint that has a tendency to confirm the good effects of this medicine, and as it is supposed by those who have not seen the first edition, that the second edition is defective, in omitting to say how the tincture and extract were to be obtained, I take this opportunity to inform medical gentlemen, that the tincture I prepare, is in the proportion of a pound and a half of the dried flowers of the *Lupulus* to a gallon of the purest proof spirit, occasionally using steam heat, and I reduce the alcohol to proof strength with an infusion made from the ingredients of the preceding tincture. The extract is the aqueous preparation of the dried flowers of the *Lupulus*, made in the usual manner directed for extracts by the London College.

I have preferred using these preparations, because one gallon of this tincture affords nine drachms more extract after the spirit is drawn off, than the tincture prepared with alcohol, and a considerable less quantity of spirit is taken by the patient. And the aqueous extract seems better adapted for medical use than the spirituous, inasmuch as the proportion obtained is as eight ounces of the aqueous, which is easily dissolved in any weak liquid, to five ounces of the resinous extract, which after it is with some difficulty dissolved, soon after separates and adheres to the sides of the vessel. This resin is acted on by atmospheric air; so much so, that it cannot be reduced to powder like others.

I am truly sorry to remark that complaints have already been made of the tincture and extract, as prepared at some houses in London; and as so much depends on the preparation of the medicine, I have taken care that the faculty, and the public at large, may be supplied with both the preparations at my residence, as it may probably be a considerable time before the new *Pharmacopœia* is published, when, if these preparations should be adopted, every medical house will be expected to keep both tincture and extract ready for use, and subject to be inspected by the Censors of the College.



*To the Editors of the Medical and Physical Journal.*

GENTLEMEN,

**I**N looking over a few of the last Numbers of your Journal, I met with several papers on the subject of Burns and Scalds, in which there seems a difference of opinion respecting the stimulating and the sedative or cooling mode of treatment; but each remedy is recommended and vindicated by high authority. I beg, through the medium of your very useful publication, to offer a few remarks on the subject, accompanied by a case.

I have been led to the following remarks by the case of a young woman, who was severely scalded with water at the boiling temperature, which was accidentally thrown upon her, and a great extent of surface was injured. In this case the early application of the oleum terebinthinæ was essentially useful, as will appear in the history of the case.

Notwithstanding all that has been said in favour of the different remedies used in the cure of burns and scalds, the success attending the treatment of such accidents must depend upon close and minute observation in practice, and the faithful publication of individual cases, which will eventually establish the adoption of either the stimulating, the sedative, or the emollient mode of treatment. It is a pity that senior practitioners should be at the trouble of writing and publishing their disputations, merely for the sake of argument, and of supporting their own individual theories and practices. Would it not be better for those who suffer under the accidents in question, and more honourable to the profession, were they to lay down certain laws or rules for the guidance of the junior and less experienced practitioners?

Before any, either internal or external, remedies are administered, I conceive the following particulars ought to be carefully inquired into. 1. The age and strength of the patient. 2. Peculiarity of constitution. 3. Whether subject to any other malady. 4. Whether of a costive or relaxed habit. 5. If a female, whether it be the menstruating period; or whether she be in a state of pregnancy, and how far advanced. 6. More particularly to ascertain, as near as possible, the nature and degree of the heat, the duration of its application, and also the nature of the parts injured, and the symptoms brought on by their derangement.

(No. 105.)

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I am of opinion that a surgeon cannot, with propriety or professional decorum, apply to a burn or a scald any external remedy, however high its reputation as a specific, without previously informing himself of the above queries; which shews, therefore, the necessity also of attending to the different divisions and degrees of burns, mentioned by Motherby, Heister, Kentish, and others; and of making use of such external remedies as are suitable to the degree of injury the parts may have sustained, and the symptoms produced.

I have frequently remarked, that ulcers which have been the result of a common phlegmon, arising from an internal cause, have required very different treatment in different persons, when, at the same time, the circumstances and symptoms have been apparently analagous to each other. This I apprehend is to be accounted for by the individual peculiarity of constitution, and probable hereditary ailments. And with respect to external applications in cases of burns and scalds, I have known that what has been useful in one case, has been hurtful in another; and so it is in regard to internal remedies.

Practical observation has long ago proved, that different persons, labouring under similar complaints, are differently affected and acted upon by the same class of medicines. Whether this difference of effect be owing to an increased or diminished irritability of the stomach and bowels, or to some peculiar idiosyncrasy, I will not presume to say; I shall therefore leave it for others, more learned on the subject, to investigate and explain.

The following observations will in a great measure prove, what I have before remarked, respecting the effects resulting from any particular class of medicines, when exhibited to different patients, apparently labouring under similar maladies.

One patient in phthisis can bear a large dose of digitalis twice in a day, and is able to persevere in it with advantage, for a considerable length of time; whilst another, apparently in a similar situation, in every respect, can scarcely bear the medicine at all, although given but in very small doses.

One patient in dropsy is able to take, for a considerable length of time, and with the greatest advantage, a bolus composed of calomel and squills, every other night, and in the morning following an ounce of cream of tartar in a state of solution; whilst another, apparently in a similar situation, cannot retain the medicines in the stomach, though the doses shall be considerably smaller. In



In cases of syphilis, I have known some persons salivated with four grains of the calcined mercury; whilst others have taken twenty or upwards before such an effect could be accomplished.

Some diabetic patients can take from 1 to 3 drachms of the diluted nitric acid, in the course of twenty-four hours; whilst others can scarcely bear the effects of one drachm in the same space of time. An instance of this kind occurred not long ago. About a month since I received a letter from a medical friend who resides at Leeds. He was then attending a diabetic patient, and he wrote me the following account of the case, having in recollection at the same time a case of diabetes mellitus, which I published in the *Med. and Phys. Journal*, vol. 13, page 152, and which was successfully treated by the nitric acid. The account he sent me is as follows. "I have a Case of Diabetes under treatment, in a middle aged, and otherwise healthy male subject, which I was called to about a month ago, when he voided sixteen pints in twenty-four hours. I immediately gave him 1 drachm of the diluted nitric acid each day, which disordered his whole frame exceedingly; increased his thirst, (before very considerable) produced sickness and vomiting, griping and purging. These were, however, relieved by an opiate, and his urine was immediately reduced in quantity one half. I again repeated the acid, but have not been able to get him to take more than 1 drachm and a half of the acid in two days, and from this quantity he complains much at times of the effect. His urine still continues at eight pints, yielding at first real saccharine matter upon inspissation in the proportion of about an ounce to a gill, of the consistence of treacle. At present, perhaps, the complaint may be said to be stationary, and I fear we shall not succeed in a cure so happily as you did."

During my residence at this Infirmary, I have many times had the opportunity of watching the progress and effects resulting from phlegmonous inflammations, which have been brought on in different persons, either by blows, or contusions from other causes. And according to the health and strength of the person, and difference of constitution, different effects have been produced.

The effects of a contusion or blow upon a soft part, are, tumour, hardness, redness, and lividness; which are sooner dispersed, and more resisted in a strong, robust, and healthy man, than in a weakly, delicate, and irritable man. In the former, when inflammation has been in-



duced by such a cause, the vigorous action of the system, along with resolvent local applications, will soon subdue the inflammation and restore the parts to a healthy action: whilst in the latter, the whole frame appears to sympathize with the parts locally affected; and symptomatic fever almost immediately succeeds in such habits, and the parts injured not unfrequently terminate in abscess.

In regard to burns and scalds, if the same degree of heat, either in a solid or a fluid state, be applied to persons with different constitutions, in respect to health and strength, the effects, I am confident, will be more violent in the person with a weakly constitution, than in the other with a strong and vigorous system. And as Dr. Kentish says, "to what are we to attribute the different appearances in these two cases, both arising from the same cause? Is it not natural to conclude, that the different degrees of strength which they possessed was the cause? What conclusion may be drawn from this? Surely, that strength resists the sympathetic irritative actions of other parts, and that weakness favours them."

Of late much has been written by Dr. Kentish and others, in favour of the *oleum terebinthinæ*, as a specific remedy for burns; and as I have known it to be of the greatest utility in several very severe cases, I must confess myself to be one of the advocates in favour of this remedy, where it is judiciously made use of; but I have seen the turpentine applied in some cases at improper periods, and to very irritable habits, and where it has proved extremely injurious by bringing on much pain, and an increase of inflammation, and which has been the means of retarding the cure, that might have been effected by remedies much more mild.

If the remedial powers of oil of turpentine be so great, is it not probable that the following articles, in proportion to their degrees of volatility, may also be useful in cases of burns and scalds. Ether, spirits of wine and camphor, spirits of wine alone, brandy, rum, and, perhaps, many of the essential oils?

"Dr. Kentish, who has had very extensive practice among the workmen in the coal mines at Newcastle, where explosions often occur, is of opinion that pure alcohol, or oil of turpentine, is the best local application at the beginning, and a cordial diet to support the patient's strength."

Dr. K. must have had frequent opportunities of trying the effects of turpentine in various degrees of injury arising



ing from burns, which has proved to him the value of such an external application : and from what he has written and published on the subject, the oleum terebinthinæ is now almost generally adopted as the grand specific remedy for injuries of this kind ; and certainly much praise is due to him for urging the adoption of what is called the stimulating plan ; but more especially in cases where the injury is very extensive.\*

I have frequently remarked that the turpentine as a local dressing, if applied immediately after the accident, is by far the most speedy in mitigating the distressing pain, rigors, and anxiety, with which such patients are afflicted.

When it is thought expedient to make use of the oil of turpentine in cases of burns, my experience tells me that it ought to be applied to the parts injured as early as possible after the accident has happened, and if the consequent inflammation be not removed by resolution in the first instance, the turpentine in a milder form should be continued until signs of suppuration commence, and then it should be changed for a dressing much more mild.

Fearing that I have already trespassed beyond the limits of your publication, I haste now to detail the case I first alluded to.

CASE.—M. B. a girl 18 years of age, low in stature, but is otherwise compact, muscular, and strong. She has been for a considerable length of time troubled with epileptic fits, commonly once or twice in a week, owing probably to her never yet having menstruated. She lives servant with her aunt, who keeps a public house.

In the morning of the 31st of October, 1806, she was assisting in brewing. After she had filled a pail with boiling water, which she rested upon the side of the boiler, and in attempting to lift it upon her head, her foot slipt and she fell down, and the boiling water was turned upon her. The whole of the cuticle, from the crown of the head to the navel anteriorly, and half way down the back, was raised into blisters of various sizes, which

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\* I do not mean to affirm or assert, that Dr. K. is the first who discovered and employed the oil of turpentine as a remedy in cases of burns, as it is mentioned by Dr. James, in his Medicinal Dictionary, so long since as the year 1743. After enumerating many remedies for burns, "he says, oil of turpentine also is to be had in readiness, with which the part is to be timely and frequently anointed."

Heister also mentions it in his Surgery, which was published in the year 1748.



which were filled with a deep yellow liquor, and which shews the severity of the scald. The parts which suffered the most injury were the face, breasts, and arms; but more particularly underneath the arms, from the axilla to the elbow, for there the scalding water insinuating into the cloaths, continued to be applied for a longer time to the skin. These parts, in a great measure, resembled burns more than scalds, as they assumed the appearance of large eschars, and in the course of the cure, extensive sloughs were thrown off.

The face in a few days put on the appearance, resembling very much the face of a person full of the worst kind of confluent small-pox; as it was covered with one continued dark brown coloured crustaceous mass, which formed a complete mask. She was nearly blind from the swelling and inflammation of the upper and lower palpebræ.

The accident happened about eleven o'clock in the forenoon. A surgeon was immediately sent for, who on his arrival ordered oil and water to be blended together, and then directed that linen cloths should be dipped into this liquid, and applied frequently to the parts affected. This application was continued eight hours, but without any apparent advantage.

At eight o'clock in the evening the patient was brought to the Infirmary, and after examining her, I found the extent of the injury from the scald to be what I have before stated; but with the addition of the following symptoms, which I did not then mention. Violent pain of the head, nausea at the stomach, and frequent efforts to vomit; the tongue was foul, continual shiverings similar to those of a person in the cold stage of an ague, and the pulse was quick. There was also great anxiety, and violent burning and smarting pains in the injured parts, which caused the patient to be so exceedingly restless, that it was difficult to keep her in bed. This was the state of the patient when I first saw her at the Infirmary.

I shall now proceed to detail the indications that were adopted at the onset, and in regular order, others, that were prescribed at different stages of the disease, until the cure was completed.

Externally. I first let out the contents of all the blisters.\* I then dipped pieces of soft old linen into cold rectified

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\* Much has been said in regard to the propriety, or the impropriety, of opening the blisters caused by burns or scalds. Some authors say that they should



tified oil of turpentine, wrung them out, and applied them over the scalded parts, and secured them by flannel rollers. The effect was agreeably astonishing, for she was no sooner dressed up, than she almost immediately fell into a comfortable sleep, and slept for nearly three hours. When she awoke she expressed herself in words truly thankful for such speedy relief, and said she was then much easier.

On account of the disordered state of the stomach, no medicines were administered except opiates, until the morning of the second day. She then began with a purging mixture, composed of a solution of the bitter purging salt in infusion of senna, then repeated as occasion required. And the patient now began to take every four hours, a saline draught, to which was added *vin. antimon. gtt. xv. Tinct. opii. gtt. viii.*

The first dressings were not removed until the morning of the third day; neither was it necessary to repeat the application

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should be let out when first raised, others say not until the inflammation has subsided; but I should give the preference to the former opinion, as I apprehend the same effects take place to a certain degree, in vesications by burns, as does in those blisters which are produced by erysipelatous inflammation preceding a gangrenous tendency of the parts. Therefore the longer this ichorous liquor is suffered to remain, the more it injures the delicate and tender surface within. I have very often noticed that when such blisters have remained entire for several days, that on being opened with a lancet, or burst by accident, the parts within have always been more or less in a state of ulceration. But this effect seldom takes place if the blisters, in the first instance, are carefully punctured in the most dependant part, with the point of a narrow made lancet, or any similar instrument, leaving the bag or skin of the blister as a covering to guard the part from the external air, and afterwards covering the whole with such a dressing as may, according to circumstances, be thought most suitable. And it will not appear inconsistent to suppose that after caloric, either in a solid or a liquid form, has been applied to any part of the body, and where it has had the effect of raising blisters, that the serum thrown out by the exhalant vessels, must in consequence be rendered in a higher or lower degree more acrid, according to the degree and duration of heat which has been applied, producing such effects. Therefore I conceive the sooner this acrid serum is evacuated, the better it is for the patient, and the parts thus affected. Indeed, I need not extend this part of the subject any further than to illustrate this hypothesis by mentioning the effects produced by a common blister raised by cantharides. After a blister is fully formed by such a plaister, the patient commonly complains of a smarting and scalding pain, caused, as he says, by the water in the blister, and that the pain is always increased upon motion, such as turning in bed, or walking gently about, which diffuses the serum over the raw surface of the cutis vera, and produces pain, which certainly shews the acrid quality of the serum; but as soon as the contents of the blister is properly evacuated, and the part is dressed with a mild digestive ointment, the patient experiences immediate relief.



cation of the oil of turpentine a second time. At the first dressing, the parts affected assumed a better aspect than might a priori have been expected, considering the severity and extent of the injury. The parts were now dressed with the following ointment, spread upon soft old linen. R. Ung. resin. flav. unc. iii. ol. olivar. opt. ol. terebinth. rect. aa unc. 1. These, after being slowly melted together, should be stirred till quite cold. I have found these proportions of the different articles, to agree better with burnt and scalded parts, and less irritating to the patient, than equal parts of basilicon and oil of turpentine, which I believe is the liniment used and recommended by Dr. Kentish.

On the fourth day there was evident signs of suppuration\* commencing; therefore, instead of applying the warm dressing to the parts least injured, the following cerate was made use of, which agreed very well with the sores, and healed them up rapidly. R. Cerat. lap. calam. unc. 1. plumb. ust. rubr. dr. 1. misce. The warm dressing was still continued to the parts that were foul and sloughy, until the sloughs came away, and then the ulcers were dressed in a common way.†

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\* In many places there was merely a separation of the cuticle, yet from these parts, there was a copious discharge of well concocted pus, many days: had Hildanus seen this case, he would have been no less surprised at such an effect, than he was with the case of a maid who had scalded her whole leg up to the thigh with water, and from whence half a pound of matter was discharged at each dressing, twice a day. See Swieten's Commentaries upon Boerhaave's Aphorisms, vol. 4, page 193.

† Dr. Kentish says, "as for the dead parts, the application which is immediately applied to them is of very little consequence, for the throwing off of these eschars depends upon a process of the system, which the immediate application to the dead part will in no way either retard or facilitate." I am of a different opinion, and need only mention in support of it, and by way of example, an eschar that is produced by the application of a common caustic, the separation of which from the living parts, I can affirm with truth may be greatly facilitated by the application of warm and emollient dressings. And Dr. K. in his second Essay upon burns, in some degree contradicts his former assertion. He says, "in cases of eschars coming away, or while they are detaching themselves, I fill up the hollow made by their loss when separated, and fill up their furrow at their edges when loosening, with powdered chalk, which is covered with a plaister of cerate; and if the process be tedious, a poultice of bread and milk is applied over the plaister?"

In cases of sloughs and eschars, the animal economy always furnishes what is termed the suppurative stage, which is the process instituted by nature for the purpose of separating the unsound or dead parts from the sound or living parts, therefore I do not see the utility of absorbing the secretion



In consequence of the difficulty to retain any dressings upon the face, it was anointed three times a day with a little of the following liniment, applied with the end of a soft feather. R. Ol. oliv. opt. aq. calcis. aa unc. 1. Aq. litharg. acet. dr. ii. misce.

The draughts before mentioned were continued until the 7th of November, with very great advantage; but as the heat of the body and the pains were now subdued, excepting at the times of dressing, they were left off; and the patient began to take three table spoonful of the decoction of bark, every six hours. The bark, with laxatives occasionally, milk, and nourishing broths, were persisted in from the 7th of November until the 19th of December, when the girl was discharged cured.

#### *Further Remarks upon the Case.*

It was observed before, that the patient, previous to her being scalded, had been subject to frequent attacks of epileptic fits. She called upon me at the Infirmary eight weeks after her dismissal, to shew me those parts upon her arms that had suffered the most from the scald, with an idea that they were going to gather, and be bad again; but upon examining them, I found that large seams, or cicatrices, which are common after such accidents, had formed, and were considerably elevated above the surface of the sound skin adjacent to these parts. It

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cretion of matter with chalk, as it forms in the furrow surrounding the eschar, because it must in some degree retard its separation; and the application of a plaister and a poultice over the chalk, appear to be remedies diametrically opposite to each other, as poultices are generally intended to act as a stimulus by drawing a gentle heat to the part, and consequently must assist in the process of suppuration.

Dr. Kentish in his second pamphlet also mentions that he uses chalk for the purpose of repressing the growth of fungns, and of absorbing the redundant secretion; and presently after it appears as if he used chalk, whether the secretion be redundant or not; for he says, "as soon as secretion takes place, I begin the use of powdered chalk heated to the temperature of the human body, which is plentifully applied to the whole secreting surface, and afterwards covered with a plaister of cerate. If it be a process of the system to produce matter beneath and round the sides of sloughs and eschars, in order to facilitate their separation from the sound parts; why should this discharge, in its very commencement, be absorbed where it is so essentially necessary, unless it be really over abundant in quantity?"

I have tried powdered chalk in cases of chronic ulcers left by burns and scalds, where there was a copious discharge, and a good share of fungus. The secretion was diminished by it, but the fungus rather increased during its application, I therefore discontinued the use of it, and have applied other more active escharotics, such as alumen ustum, zincum vitriolatum, calcinatum, cuprum vitriolatum, and the argentum nitratum,



It is recorded that a violent head-ache in one person; and a pain in the limbs in another person, were removed by the parts affected being accidentally burnt, and that only in the first degree of burns.\* And it deserves to be mentioned, that this girl has had no return of the epileptic fits since the time of her being scalded, which is now nearly four months ago. However, upon further enquiry into her then present state of health, I learned that she had not yet had the catamenia; but that she had been regularly attacked, about the end of every third week, with violent pain of the head, and vomitings of bile, which always continues, more or less, for two or three days; then these symptoms go off, and she remains well until the next attack, which is an interval of about three weeks. I conceive these complaints to be symptomatic of chlorosis, which no doubt will continue to trouble her till a change† is produced in the uterine vessels, causing a regular discharge of the menses.

In regard to the scald in this case having removed the epilepsy, it accords with many other instances of this nature, which are recorded by different authors. One case, somewhat similar to this, is mentioned in Dr. Kentish's first Pamphlet, see page 67.

Homburg thinks that burning with moxa, with cauteries, &c. cure by quickening the motion of the humours, and thinning them, and by destroying the ends of the vessels by which the humours flow less that way. Hence appears the great utility of caustics, setons, blisters, &c. in the treatment of various diseases. I am, &c.

Oct. 2, 1807.

ROBERT EARNEST,

House Surgeon to the Sheffield General Infirmary.

\* See Motherby's Medical Dictionary, Art. *AMBUSTIA*.

† I am happy that it is in my power to say, that this change has taken place. I met with the young woman's aunt by accident, a few days ago, who informed me that three months since, her niece had been attacked several times by epistaxis; which seemingly was the harbinger of the catamenia, which took place almost immediately after blood ceased to flow from the nose, and the natural discharge has been regularly evacuated, for the last three months; and the girl is now in perfect health.

It will not be improper again to remark that upwards of ten months have now elapsed, and there has been no recurrence of the epileptic fits.



*On Fracture of the Sternum; by Mr. T. BISHOPP, Member of the Royal College of Surgeons.*

IN the Medical and Physical Journal, No. 103, is a valuable paper on Fractured Sternum, by the celebrated M. Sabatier. By this paper it appears, that he employed in his cases only a *loose* bandage, with a view simply to retain on the part his medicinal applications. He did not try a strict bandage, not because, as it should seem, that he had before actually found it to be either useless or injurious, but because he imagined it must be useless. Now, with the great utility of a tight bandage around the ribs, when any of them are fractured, he was unquestionably sufficiently acquainted; but, that this would likewise be useful in certain cases of fractured sternum, whose circumstances are very similar, appears not to have occurred to him. Whether such compression may answer a good purpose in all circumstances of this fracture, I am very incompetent to say. Whenever spiculæ of bone can be supposed to have been driven inwards, any further depression would certainly endanger the internal mammary vessels, &c.; but the pressure produced on the sternum by a circular bandage is very little, often none at all. That it succeeded to my utmost satisfaction in a single instance, will appear from the following narrative.

George Popple, ætat. 36, a very robust man, a carrier, was knocked down by two ruffians, who after having beaten him most violently with a bludgeon on the breast, head, and arms, imagined they had killed him; yet, in order more completely to effect this purpose, one of them leaped upon the breast of the unhappy victim of their brutality whilst lying on his back. The poor man, still retaining his senses, now perceived a copious effusion of blood from his mouth and nostrils, and the heart and lungs to be pressed violently as it were up into his throat. In this condition the villains left him. After two or three hours he was brought to Leicester, two miles distant from the fatal spot, in almost a lifeless state. I found him, about eleven o'clock, P. M. very cold and faint, with a faltering, labouring pulse, breathing much oppressed, leaning forwards, and unable to speak. Upon undressing him, I discovered that the sternum was broken into three irregular portions; the os brachii of the one, and the radius and ulna of the other arm were also broken. I could not ascertain that any of the ribs had suffered in the same way.



way. After he had become sufficiently warm in bed, I bled him freely, and bound up the chest with a tight napkin; gave him an opiate, and directed that he should take nothing but common tea. The next morning he was extremely ill, respiration excessively laborious, cough incessant, with bloody expectoration; great vascular excitement, together with great pain and oppression in the chest, complaining much of a pricking pain under the sternum, and of stitches in his sides whenever he coughed; he could breathe only when nearly half erect in bed. I now bound the ribs very firmly with a broad inelastic girth, furnished with four straps and buckles, when he exclaimed, "he was in heaven." I bled him very freely again, twice or thrice, purged him severely every morning, and added to the strictest antiphlogistic plan a nightly opiate. He went on well till the morning of the fourth day, when a servant hastened to call me to his assistance; as, upon her raising him up to give him some food, he instantly screamed, fell backwards, and appeared to be gasping for his last breath. I found him black in the face, frothing at the mouth, the eyes staring, in the greatest imaginable agony. Staggered at this alarming appearance, I looked if the bandage had been loosened; which had happened; and upon tightening it, the problem was solved by the speedy cessation of the more distressing effects, and by his becoming tranquil and easy in less than ten minutes. The bandage had slipped down. To obviate the recurrence of such a disaster, shoulder-straps were attached to it. The case went on afterwards without a single difficulty. In about eight weeks he was able to ride on horseback. The fractured sternum had reunited perfectly with little or no irregularity; for it should have been before stated, that one portion was not depressed at all under another.

It is not, I apprehend, the coaptation of the bone that is of main consequence in these accidents; Nature will commonly adjust all this part of the business, and effect the reunion, whatever be the new relative position of the fragments. The object most deserving our immediate attention is the present performance of respiration in the most easy manner possible. The anterior extremities of the ribs are here no longer the fixed points they were before, consequently the muscles soon become so much fatigued, that they can act no longer, or they act with great difficulty; all our dependance therefore must be upon steadying the ribs, by applying to them a firm lateral support. It is, then, to fatigue and spasm of the intercostal  
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and other muscles concerned in respiration, and not to the mechanical irritation from the fractured bone, that I would generally attribute the greater part of the distress produced, ab initio, from this accident; accordingly, my patient felt as if his body were parting into pieces when he was unbound.

*Leicester, October 1807.*

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*To the Editors of the Medical and Physical Journal.*

GENTLEMEN,

THE last Number of your Journal, page 337, records a case in Midwifery, under the care of Dr. Dewees and Dr. Jones, in which a most powerful and dangerous remedy was tried, apparently without the least necessity, and certainly with no good effect.

However unpleasant it may be to animadvert upon cases furnished by contemporary practitioners, it is necessary, for the improvement of our art, to examine critically whatever is published concerning it, and to express our disapprobation of any method, which seems to have been unnecessarily introduced, or injudiciously conducted. This motive alone, induces me to make a few remarks on the first of Dr. Dewee's cases.

In drawing up medical histories, there is some difficulty in discriminating between too much minuteness of detail, and too much generality; in the case under consideration, something more of circumstantial detail would have been an advantage.

Dr. Dewees has omitted mentioning two very essential particulars, namely, what was the age of the woman, and whether it was her first child; from a knowledge of these two facts, much assistance would have been afforded, in judging of the method of treatment.

Enough however is recorded, to render it manifest that the poor woman's labour would necessarily be tedious; for the waters had been evacuated (whether designedly is not said) early in her labour, and at the end of sixteen hours the os uteri was *very rigid*, and *but little opened*, and the os externum *scarcely large enough to admit a finger*. In such a state of the parts, no injury could have ensued from at least eight hours further delay; and surely no possible



sible necessity could then exist for keeping a steady pressure against the perinæum, in order to prevent the escape of the child's head through it.

Dr. Dewees says, that the pains were frequent and brisk, but that there was not the least disposition in the soft parts to dilate; of course the pains, if at all uterine, were partial, and probably spasmodic. Such frequent and ineffacious pains (familiarily called cramp pains) almost constantly happen, when the anterior part of the uterus is squeezed between the child's head and the ossa pubis, as was evidently the situation here; for the child's head, covered by the uterus, was low down in the pelvis, and the waters had been long evacuated.

In such circumstances, the patient is extremely restless, and very urgent to get relief, and the by-standers are frequently very importunate to have assistance given; but more judgment is shown in soothing the patient and gaining time, than by any manual endeavours to hasten delivery.

I cannot conceive a case, in which this plan would be more required, than in the one we are now considering. The loss of some blood, according to the strength of the patient, an emollient clyster or two, perhaps even a dose of Castor oil, or some other mild laxative, and from thirty to forty drops of laudanum, with light and simple nourishment, joined to time and patience, would have overcome all the rigidity complained of; and the woman would have brought forth her child with very little assistance from her medical attendants.

It was however deemed expedient to adopt more active measures for overcoming the rigidity; and as tobacco clysters have been occasionally found useful by their relaxing qualities, in promoting a reduction of strangulated herniæ, it was determined to try whether they would not be equally efficacious in relaxing the rigidity of the os uteri. Accordingly, a *strong infusion of Tobacco* was thrown up the rectum, by which great sickness, vomiting, and fainting were excited; but though these distressing symptoms continued for an hour and a half, the desired relaxation did not take place. Another trial of the same remedy was then made, *much against the patient's will*; but though all the above enumerated symptoms were once more brought on, the rigidity of the os uteri continued as firm as ever.

I cannot however but think, that these clysters were, indirectly, productive of more effect than is attributed to them



them by Dr. Dewees; for the very complete and sudden relaxation, which was produced immediately afterwards by drawing away ten ounces of blood, is a very unusual occurrence. It is to be recollected, that the os uteri was *very little open, and very rigid*; the child's head low in the pelvis, *covered by the uterus*; and the os externum *scarcely large enough to admit a finger*; yet on taking away ten ounces of blood, all the tightness and rigidity give way at once, the os and cervix uteri dilate and disappear, and opportunity is allowed for applying the forceps, by means of which a fine child is brought into the world *in a few minutes*.

Nothing but the most extreme debility could have produced so sudden a change in the state of the labour; it was like the delivery of a child, when the uterus has been relaxed by profuse hæmorrhage, or when the mother is rapidly sinking in the last stage of a consumption. Such a state of debility could not but be very dangerous and alarming; and I must think, was particularly to be guarded against, in a woman *subject to violent cholera morbus and convulsions*, by which diseases, we are told, she was carried off, about six days after her delivery.

Altogether, it is a melancholy case. From the detail given, there does not appear to have been more difficulty than might be remedied and overcome by the usual and authorized modes of assistance. In labours attended with difficulty, on account of the tightness and rigidity of the soft parts, sixteen hours afford but a short time for the uterine pains to produce a relaxation and dilatation of the os uteri and os externum, even if the membranes remain unbroken. But on this occasion, the waters had been evacuated early in the labour, and experience has taught us, that twenty, thirty, and forty hours must sometimes pass away, when such an accident has occurred, before the parts will be in a proper state to admit of the mother's safe delivery.

At all events, it has now been ascertained by two adequate trials, that tobacco clysters cannot be safely and advantageously employed, for relaxing the passages during a hard labour: it is therefore to be hoped, that no similar experiments will be made with such harsh and unmanageable medicines.

In another part of your Journal, p. 344, a case is related by Dr. Elmer, supposed to have been "a mortification and separation of the body of the uterus." Many histories are to be found in authors, nearly similar to Dr. Elmer's,



mer's, which have proved to be in reality, cases of uterine polypus protruded through the os externum.

In the valuable *Sepulchretum Anatomicum* of Bonetus, several of this kind may be referred to. In some of these, the sphacelated tumour, supposed to be the uterus, was removed, and in others the putrefying mass occasioned the patient's death, but on opening the bodies, post mortem, the wombs were found entire, and in their proper situation within the pelvis. *Vide Boneti Sepulch. Anatom. tom. iii. lib. 3. sect. 32, obs. 7, 8, &c.*

It is scarcely credible, that a disease of so serious a nature as a mortification of the womb could have been cured by the very insufficient means, which, according to Dr. Elmer's account, were alone employed in the case he has communicated, viz. fomentations of bitter herbs, with large doses of a nitrous julep, and spir. lavend. comp.— Besides, if the whole uterus were extracted, what would become of the vesica urinaria and intestines. For want of their usual support, they must fall into the cavity of the pelvis, and would soon be protruded also, and death must inevitably be the consequence.

I am, &c.

SAMUEL MERRIMAN.

Curzon Street, May Fair, Oct. 3. 1807.

### *To the Editors of the Medical and Physical Journal.*

GENTLEMEN,

**Y**OUR correspondent Mr. Davies, has communicated in your Journal, a paper on Medical Controversies; and although the remarks in it are rather amusing than profound, I beg leave to draw the attention of your readers to the subject. It is well known that the *practical* opinions of medical men have been materially unsettled on the *subject* of gout, and of accidents from fire. It is well known, also, that the propagation of the cow-pox has given rise to many preposterous prejudices, and that, to allay these prejudices, Mr. RING has argued with great zeal and effect. These diseases have hitherto been considered as *practical subjects*; yet your correspondent, Mr. Davies, in your last number, attempts to cast a slur on your Journal for encouraging the investigation of them, and requests you in future to furnish him "more" with *practical subjects*. "It is to be



be hoped, Sir," [I give his words and emphasis] "that your valuable miscellany will be furnished more with *practical* and less with *controversial* subjects, in future." What practice can it be that Mr. Davies so dictatorially calls for? I can assure Mr. Davies, that the diseases, which he considers only as controversial, are important objects of practice elsewhere. Even accidents from fire, [which are included in Mr. Davies's list of controversial subjects] so far require potent practice, that within the last half year I have witnessed no less than three *fatal* instances; and, what I consider, trifling treatment was alone pursued.

I am totally at a loss to understand Mr. Davies' ideas of controversy. Science at one time was a "warfare about words, and unfortunately this circumstance has brought the TERM controversy into disrepute. Is it the TERM only which offends Mr. Davies? In our science of course, as demonstration cannot be attained, there must exist a contrariety in evidence:—contrariety of authority, contrariety of experience, and, above all, diversity in habits of thinking. It is particularly the nature of the medical science to require comprehensive consideration; and without it, however ardent we may be in the pursuit of reason, we shall most probably go astray. Mr. Locke, on this subject writes very emphatically. There are many he observes, "who readily and sincerely follow reason, but for want of having that which one may call large, sound, round about sense, have not a full view of all that relates to the question, and may be of moment to decide it. We are all short sighted, and very often see but one side of a matter; our views are not extended to all that has a connection with it. From this defect I think no man is free. We see but in part, and we know but in part, and therefore it is no wonder we conclude not right from our *partial views*. This might instruct the proudest esteemer of his own parts how useful it is to talk and consult with others, even such as came short of him in capacity, quickness, or penetration." Now, comprehensive consideration necessarily *includes* controversy: for as we cannot form a solid judgement from *partial views* [in public or in private] we must either believe ALL OPINIONS, which would be incongruous, or CONTROVERT SOME. Controversy therefore is essential to the good foundation and improvement of Physic from the nature of the science. But we will condescend, as if proof was wanting, to apply the test of experience. For what reason did physic remain in the corrupted state in which it was left by the Arabians, and for centuries,

(No. 105.) F f [Friend's



[Friend's History of Physic] but because error and ignorance were unsuspected and unexamined, and the faculties of the mind lay dormant? Compiler compiled from compiler; commentator commented upon commentator, and until authority was *controverted*, physicians continued in their ignorance. And does not controversy REMAIN equally important to the progressive improvement of physic? To discover truth—to clear up doubt—to dispel error; this is the definition of controversy. The object of investigation, is knowledge; but if, *in addition*, investigation is also pursued to eradicate prejudices; the investigation then goes by another name, and is called controversy. Such is the ambiguity of language.

The sources of error in the science of medicine are so numerous, that if controversy was confined to mere refutation, it could not with this restraint of its scope be too much cultivated. To mention only one of the many sources of error, which have yet been detected, I may instance the credulity of medical men in general. It is undeniable that many of our opinions are adopted, for which we cannot possibly give any account beyond mere faith in authority of professors. These professors had the same occasion for respect of, and confidence in, the authority of those from whom they had the advantage of reaping their knowledge. The farther we go back, the influence of authority gains ascendancy, and we come to the period before mentioned, when reason and experience were wholly suppressed, and when physicians did little more than register the prejudices of the times which preceded them. Habits of thinking too are hereditary; hence the many absurd doctrines which were conjured up in the ages of ignorance and superstition have been FAITHFULLY transmitted down to our times, and many of them still obtain credit. It is in this way that posterity is encumbered with the prejudices of their predecessors; and these prejudices are with the more difficulty detected, because *the writings of many are so disguised that it cannot be known what they give from experience, and what from conjecture.*

If error therefore was not daily springing up from wrong habits of thinking, controversy would be of the first consequence for the improvement of physic, to dissipate that error which is already entailed upon it.

I lately submitted to your readers two hasty papers; the one on the treatment of gout, the other on the treatment of burns and scalds; as these happen to be subjects which Mr. Davies wishes to be discontinued, because they are not practical,



practical, I presumed to feel somewhat the weight of his censure. I must, however, be permitted to say, that if Mr. Davies has made up his mind to pursue the didactic style of instruction only, *non omne feret punctum*, till he mixes more of the utile and dulce. Mr. Davies is doing nothing in affirming it possible "that an opposite mode of treatment of the same disease may prove successful with patients of a different temperature," and then adding—a full stop! These affirmations have been printed again and again, and had an equal chance of producing conviction when supported by reason and experience, as when unsupported by either one or the other.

Upon the whole, Gentlemen, I think Mr. Davies has treated controversy in a supercilious and very superficial manner; and, if I may be allowed to retort his words, "it is to be hoped in future" he will confine HIMSELF to "*practical subjects*."

I thought it too ridiculous to consider Mr. Davies's only objection to controversy. He compares [in some mysterious way] the reading a paper to the "ringing a peal," and he says, they have alike upon him, [if I understand the sentence] one effect, and that only on his "*Ears*." It is needless to "*RING*" another peal in his ears. Perhaps Mr. Davies was rather unbecomingly reflecting on Mr. Ring's ingenious papers on the cow-pox, which have done much credit to your Journal. Doubtless in this case Mr. Davies considered himself *penning a good pun*.

I am, &c.

P. O.

September 5, 1807.

*To the Editors of the Medical and Physical Journal.*

GENTLEMEN,

AS the following doctrines, particularly so far as they relate to Quarantine, will, if acted on, lead to immense alterations, I request not that you or your numerous readers should pay me the compliment to adopt them without anxious thought, but that you will give them a dispassionate and careful examination: in doing this, some, perhaps, may say I shew a distrust of what I write? But in return, I can assure them, I feel no other distrust than what a man should feel when he relies altogether on his own judgment; and that though I solicit to be consid-



dered as an advocate rather than as a judge, I wish the train of facts and arguments which I have to adduce, may meet with candour, as I have never to my knowledge misstated or misrepresented the smallest circumstance, or given to an argument more force than it was entitled to.

In the last letter which I had the honour to address to you, (published in your Journal for June) I took a glance at the declension of our trade, the failure of our revenue, and a national bankruptcy, as effects which might result from our Quarantine doctrines: and promised to shew such doctrines were totally erroneous; I mean in this and my succeeding letters to go over some of the same grounds again more in detail; and to endeavour to fulfil my promise.

In my last, I noticed as an important circumstance, that fevers have prevailed over almost all the known world: they have *often* done this,—I think according to Mr. Noah Webster's learned and valuable history of Epidemics, they have done so once in fifteen or twenty years, for some thousand years: and they have sometimes continued to prevail a long time together; but it is rather difficult in most cases to say exactly, how far a general epidemic does extend. If, however, it extend to Syria, Egypt, the other shores of the Mediterranean, our settlements in Africa, the West Indies, the United States of America, and the East Indies, it will extend to most of the important places which we trade to; and those are the places which it has most commonly attacked.

Now, according to this statement, (and it must be evident it is true) I do not see how we can expect our trade to be carried on to these places to that extent *which has now become necessary to our existence as a nation*, for very many years uninterruptedly, according to the quarantine doctrines; but happily for the country, these doctrines are opposed by experience; and consequently may be somewhat disregarded.

It is inconsistent in medical men, who maintain that common fever is contagious, to assert the endemics of Syria, of Egypt, of our settlements in Africa, of the West Indies, the United States of America, of Bombay, and the other parts of the East Indies, and of the Island of Java, are not contagious, because, the common fever seldom prevails rarely so *extensively* as they do, and is not comparably so dreadful? In fact, the advocates for contagion find a great reluctance in admitting any of these to be non-contagious; but a long intercourse with these places during their



their endemics, joined with the opinion of the natives, has induced a hope in many, that the common fevers of most of these places are *not contagious*; and a communication is carried on with them quite contrary to that caution which the strict advocates for quarantine require; this is one reason why we as a nation have suffered so little already.

But our security ought not and cannot depend upon practices which are the result of any thing but a clear and definite knowledge; the medical men who advise government may say even now, such practices are wrong; I know there are many of the greatest eminence, who stand aghast at the idea of the common fever of Bengal, of the West Indies, and of America, not being deemed contagious, and who would not let a ship come near our shores from any place where a fever prevailed at its departure! Tho' but few places which we most trade to, are ever exempt from some fever for any length of time, what would most medical men then have, if *epidemic* fevers raged at those places. For "*a widely spreading epidemic*" with them signifies the same as "*a highly contagious disorder*." I will not say what such men might wish to have done; they, perhaps, might wish to burn all the ships which ever had been at such places?—But, if they only got Quarantine strictly enforced, they might do an injury which our trade and revenue could *never* recover; and more particularly if other nations should disregard Quarantines. But indeed such gentlemen, to be *consistent*, should burn our ships and their cargoes; for I cannot admit that Quarantine could cleanse them from contagion! Under our present theoretic ideas then, we cannot be sure that a *practical* consciousness of safety in trading to most places under certain circumstances will be sufficient to warrant us in the authority freely to continue to trade to such places under such circumstances; and we may fearfully apprehend circumstances will soon and often arise, which will render it almost, if not altogether, impossible to trade to such places for a great length of time.

If what I take the liberty to offer, is so new,\* and on subjects so highly interesting, I think you will agree with me, I shall do best to write but little at a time, in order to give the utmost opportunity to your Correspondents,

F f s

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\* Dr. A. will see in our 102 No. page 111, that his ideas have been familiar in America for a considerable time. Ed.



dents, to consider and oppose it. It is evident, I anticipate contradiction; but I hope envy will have no share in it, as any popularity or distinction which it is *possible* for me to gain, will have cost more than any body would choose to give for it, and I may be charged with causing evils, towards the induction of which my intention will be totally guiltless.

I am, &c

THOMAS ALDER, M. D.

October 2, 1807.

*To the Editors of the Medical and Physical Journal.*

GENTLEMEN,

I HAVE just received the last Number of your valuable Journal, and have been considerably amused by the Speculations of your Correspondent Mr. Dawes, on the *Economy of the Liver*. This Gentleman seems anxious to refute the various suggestions of preceding physiologists, or as he denominates them, "The variety of hypotheses which have been formed, to account for the important function of the liver," by an hypotheses the most fanciful I ever heard started. To say, that because secretions in general are formed from arterial blood, the bile must also be secreted from arterial blood, is, in my opinion, much the same as saying, that, because the kidneys secrete urine, the testes should also secrete that fluid. The bile is a fluid so very different from every other animal secretion, that, I think it even more than probable, that it is a secretion from venous blood. But let us reason on the subject, and take facts along with us.

When we consider the quantity of blood, which must be necessary to nourish a viscus of the size of the liver, and know that this nourishment is derived solely from the arterial blood; it will be admitted as a fact, not an hypotheses, that there is not much more blood conveyed by the hepatic artery than is sufficient for this nourishment. Mr. Dawes's position derives no support from Dr. Saunders's experiment, for I know by experiments of my own, (which by the bye, I may trouble you with some day) that there is very little difference in the quantity of serum in blood drawn at the same time from an artery and a vein. Nay, I have found



found in some instances, that blood drawn at the same time from the jugular vein and external carotid artery, exhibited but very little difference in the quantity of serum. And surely Mr. Dawes will not contend, that the blood, in both instances, was *arterial*.

Mr. Dawes seems to convert the spleen to a strange use, namely, that of supplying the liver with arterial blood. The functions of the spleen have been long canvassed, and no viscus in the human body has been made subservient to such a variety of purposes. Yet its functions are simple, and its use appears to me, abundantly evident. In it we see one of the wise provisions of Nature, it serves merely to regulate the functions of the stomach; not by furnishing arterial blood to the liver, but by regulating the quantity of blood necessary for the secretion of the gastric juice; and, as such, I would call it the reservoir of the stomach. When the stomach is empty, there is of course, no necessity for the secretion of the gastric juice in any quantity, therefore the blood is diverted, if I may so speak, from the stomach, by the vessels of the spleen, which has full room to expand and receive this blood, which is returned like the blood from the other viscera to the vena portæ. On the contrary, however, when the stomach is filled with food, it occupies a greater space; it presses upon the spleen, and prevents it from receiving any great quantity of blood; and as the blood then cannot circulate in the spleen, it passes on to the stomach in greater quantity, and thus furnishes the increased secretion of that liquor peculiar to the stomach, and so necessary for digestion.

The coronary artery may be stimulated by the food, but it is only from the splenic vessels it can derive the supply so much wanted for furnishing a supply of the gastric juice. And we must look to the generally increased circulation for the supply of bile. For from what is the fact, namely, that the spleen is always pressed upon when the stomach is distended, instead of there being an increased quantity of Mr. Dawes's *spleno-arterial blood*, to be *elicited* for the secretion of bile, we find that the quantity of blood, which is returned by the vessels of the spleen called veins, is much less at that time, than when the stomach is empty, and when there is so much increased action to *elicit* it.

I am, &c.

Richmond, October 5, 1807.

MEDICUS.



*To the Editors of the Medical and Physical Journal.*

GENTLEMEN,

**T**HE Reviewer of "Pethox Parvus," in your last Number, page 584, appears disposed to look upon the inoculation of the small-pox with a more favourable eye than the writer of this note can honestly and conscientiously do.

Some authentic data are yet wanting, to ascertain the precise value of vaccination, compared with variolation. For this purpose, it is necessary to determine the average number of severe and unfortunate cases, under inoculation, not immediately terminating in death; as well as the number of deaths. Is any register of such cases kept at the Small-pox Hospital, or at any other Hospital or Dispensary? If any private practitioner would state the cases of the above kind, which have occurred in his own practice, he would do much service to society.

It is well known, that many of the children in that useful charity, the school for the indigent blind, have lost their sight from the severity of the small-pox:—what proportion do those, rendered blind by the inoculated, bear to those, who have suffered from the casual small-pox?

Can it be ascertained, what is the exact number of deaths, from inoculation of the small-pox, in London? The writer of this has had reason for many years to believe, that among the generality of inoculators, the number of fatal cases has much exceeded one in a hundred.

There is very little doubt, that if the casual small-pox was traced to its source, it would very frequently be found at the Small-pox Hospital, where about two thousand are annually inoculated, and daily carried about the streets while under the eruption. In vol. xiv. p. 311, some very striking cases are published, of the propagation of the casual small-pox, from the careless manner of inoculating, and of suffering the inoculated to intermix with society.

S. M.

October 6, 1807.

*To the Editors of the Medical and Physical Journal.*

GENTLEMEN,

**T**HE 80th No. of your Journal conveyed some ingenious remarks by Mr. Harrold, on a Case designated "Acute Rheumatism terminating in suppuration," which you were



so obliging as to insert for me in a preceding number. Begging Mr. Harrold's pardon for my long delay, I embrace this the most convenient opportunity that has since offered, to notice those remarks. This was a case of acute migrating inflammation, which, after the patient had complained several days of pain and stiffness, principally in the wrists, was ushered in by high inflammatory excitement of the system. It appeared on one knee, then attacked successively the other knee, the ankles, the arms, wrists, and fingers, the clavicle and shoulder, and finally the intercostal muscles, diaphragm, and the bowels; terminating fatally on the 12th day after its invasion. The subject of the disease was a thin, spare lad, of inflammatory habit, who became ill after having lain on the ground, while heated by exercise, in the month of October. The general expression of the disease so strongly represented the rheumatic type to my view, that there appeared to me nothing ambiguous in it, excepting a greater disposition to run into suppuration than what genuine rheumatic inflammation usually has. My own experience (not the most extensive to be sure) undoubtedly had not furnished me with a parallel exception; but, considering the remote cause of the disease, the symptoms in their origin and progress, the series of parts attacked, the tendency to metastasis, and the mode of fatal termination by attacking the respiratory muscles and the intestines; I did not conceive that this tendency to suppuration, partial as it was, affected essentially the character of the disease. In its general contour it must be allowed to represent, with tolerable precision, the prototype given by Cullen in these words: *Rheumatismus. — Morbus ab externa, et plerumque evidente causa; pyrexia; dolor circa articulos, musculorum tractum sequens, genua et reliquos majores, potius quam pedum vel manuum articulos infestans, calore externo auctus.* The specific inflammations do not always keep within their proper limit, as appears occasionally to be the case in scrophulous inflammation; in erysipelas, the inflammation of small-pox, chicken-pox, &c. The case in question I had considered as an example of such deviation, not admitting of doubt, till it was suggested by Mr. Harrold. That Gentleman endeavours in the paper above referred to, to shew that the specific character of the inflammation here, was rather that of the true uncombined phlegmon than of legitimate rheumatism. The cases which fell under his observation, to which he alludes, which he collates with mine, and upon which he seems to ground his arguments,



arguments, had, very probably, no affinity to rheumatism; but that this was also the state of the case I have described, requires some further confirmation than what Mr. H. has advanced. The case was a notable one, and of importance in a pathological view: it ranks with those which Darwin, Kirkland, and others, have deemed to be instances of rheumatism inducing suppuration. And it was brought forwards by me as a well marked instance of such an unusual termination or combination: an outline only was therefore obviously intended to be sketched sufficiently to identify the primary disease. While I contend that the essence of the case was genuine rheumatism, I am principally solicitous to ascertain, whether it is to be considered an admitted fact, in the history of that disease, that one of its terminations is in suppuration?—A question I should be highly gratified to see decided upon more ample evidence than is afforded by our systematic authors.

*To the Editors of the Medical and Physical Journal.*

GENTLEMEN,

CONVINCED that no arguments will be superfluous, no time mispent, nor a page of your Journal misapplied, by attempting to corroborate a practice, which is justly entitled to our warmest support, I take the liberty to transmit you the two following cases of the successful treatment of Chronic Rheumatism, by a plan suggested (in a former number) by Mr. Davies of Piccadilly. The symptoms of this disease are so generally known, and the proximate cause so accurately described by him to be, “an atony of the extreme vessels,” that I should consider any comment on that head, not only unnecessary, but superfluous. However, as I am no advocate for practice without theory, for effects without causes, for the application of remedies, without some idea of the “*Modus operandi*,” I beg leave to mention, that, what particularly recommends this mode of treatment is, that practice is here built upon principle, and that principle founded in reason. But to prevent any unnecessary intrusion on your valuable pages, I will, without any further introduction, proceed to the subject.

Mrs. M. was suddenly affected with the usual symptoms of “*Rheumatismus Chronicus*,” the disease was so extremely violent, that an unusual degree of palpitation was  
excited,



excited, and the subject in the most excruciating pain. A desire to alleviate as much as possible the distresses of his patient, induced the medical attendant to endeavour to remove this most unpleasant sensation (the palpitation) by venæsection; accordingly, she was freely bled to the amount of about ten or twelve ounces; this, however, afforded only a temporary relief, and the symptoms soon returned with their accustomed violence. As the indication was so clear, no hesitation was entertained on the part of the practitioner, what mode of treatment to adopt. He had immediate recourse to *that* already hinted. With this intention, draughts composed of the decoct. cinchonæ and a little warm stomachic tincture, were given every four hours, while the exhibition of large doses of opium was regularly continued; and it is with a degree of satisfaction I have the pleasure to add, the result exceeded our most sanguine expectations. Nor was the terebinthinate application less regularly had recourse to, by a constant use of which, (in conjunction with the internal medicines) the patient was enabled, in the course of a few days, to walk across the room, which, till now, she had not done during her illness. The rapid strides she was apparently making towards a hasty recovery, did not act, as an inducement to discontinue those medicines, which had hitherto proved so unprecedently successful. It should have been remarked that, during the violence of the disease, the opium was *gradually* increased, as the constitution would admit, the limit of which amounted to 6 grs. in four-and-twenty hours, which quantity, I believe, it never exceeded. Every day now exhibited a more desirable appearance, so that nothing prevented me from pronouncing my patient *a complete convalescent*; nor would even this epithet be applicable to her long, for in the course of two or three weeks, I had the pleasure to find her (by a constant and regular perseverance in the plan prescribed) perfectly recovered; since which she has not been attacked with the least return of her disorder.

The second case was Mr. D. G. In order to avoid repetition, which must otherwise be the case, I shall only just observe, that the symptoms, in this instance, were just the same as in the former, except from the less violence of the attack, no palpitation was occasioned; on which account the necessity of venæsection was entirely superseded. In all other respects, the same mode of treatment *precisely* was adopted, and to my extreme satisfaction, with equal success. From the above two cases, with a few others, which



which have lately fallen under my observation, I am so fully satisfied, of the propriety of this treatment, that whenever a case of chronic rheumatism engages my attention, I cannot by any means be induced to adopt, or even think of, any other. It is not to be expected, that a practice, which has only been ushered into the notice of the medical public, by individual recommendation, will at once be received with general approbation; I therefore consider it the duty of every practitioner, to contribute all the support he is able, by giving every additional account of its successful result, which falls under the eye of his immediate notice, for I am fully convinced the wider the scale of its adoption is extended, the more the benefit of its results will be experienced.

I am, &c.

October 9, 1807.

AMICUS.

*To the Editors of the Medical and Physical Journal.*

GENTLEMEN,

I AM charged by Crito of perverting his and Dr. Cayley's meaning, in my Remarks on their respective Papers; a charge, which, with your permission, I cannot silently pass over. I may not, perhaps, have adhered to the very words of Crito's paper, but, on a careful review, I cannot think that I have perverted its sense. The challenged passage is, where I have observed, that Crito attributes every thing bad to compression. "Where," says he, "does he find me to say that?" Not, I will allow him, in the exact terms; but, does he not in his case of wounded ulnar artery, represent the arm as swelled equal to a man's thigh, the wound looking ill with a gangrenous appearance? And does he not immediately say, that he inserted this case to show the effects of compressing the artery? And further, "the swelling was very alarming of itself without the hæmorrhage," which he could only attribute to compression. There is therefore, it will appear, a difference only in words between us, not amounting, I hope, to a perversion of sense.

I will not proceed further with the dispute between us, respecting the propriety of calling the tibial arteries branches merely of the popliteal. I only meant to inculcate



cate the importance of these arteries;—while Crito observes, “Allowing it to have been aneurism, it was only one of the branches of the popliteal.” Evidently derogating from the importance of these arteries. But what vessels could he select of more consequence to the practical surgeon, considering their liability to accidents, and, in some points of them, their difficulty almost amounting to impossibility of access? We have already observed on this head, that it would have added greatly to the interest of Dr. Cayley’s case, if he had given us the precise situation of the wound; we could then have spoken more determinately about, not only that, for it would besides have been very satisfactory to have known what part of the artery it was, that Dr. Cayley was so fortunate as to obliterate by compression. It being a fact, of which we all must be apprised, that those points of the arteries that are in a manner beyond the reach of operation, would, from being so surrounded and cushioned as it were with flesh, be the most difficult to obliterate by compression. Crito indeed, still holds an opinion, that this was not a wound of the anterior tibial artery; a point, very unnecessary for us to establish now, or we would refer him, in support of it, to the consideration of the first gush of blood to the nature of the instrument which gave the wound, and would ask of him, what other artery have we in the track of this, that could afford us a tumour of considerable size, in which, “the pulsation through the whole was not only tangible, but visible across the room?” Indeed, “of this circumstance,” as Crito observes by me, “Dr. Cayley must have been the best judge.”

Crito now recurs to his case of wounded ulna artery, and laments, that we should not understand what he means by sewing the artery; and to be sure, he has given us a luminous explanation. The case runs thus, “On the second day it began again to bleed. He (the patient) then came into town, and had the artery sewed by a surgeon. On the fourth day after it was sewed, the artery began to bleed; an attempt was again made to secure it, with very little hope of success; it, however, prevented the recurrence of the hæmorrhage for three days, but on the fourth day it again returned; any attempt to sew it was now deemed improper.”—Would any body suppose, in all this mention of sewing, that Crito was diving, time after time, with the crooked needle, to hook, as it were, the perverse creature, and include it in a ligature? And yet his explanation brings us to such conclusion. That he did not however,  
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in his repeated attempts, get round the artery, is self evident, from the frequent and quick returns of hæmorrhage, as well as from the man requiring at a future time, a certificate to exempt him from military duty, which Crito, observing his perfect recovery, denied him. Whereas, if he had succeeded in getting round the artery in this way, that is, by determined stroke of the needle, he must unavoidably have encompassed the nerve, and in that case, the contracted fingers of the sufferer would have exhibited a sad and unequivocal testimony of his inability.

Finally, another case of this sort is alluded to, "Where the ulnar artery was cut with a knife, which terminated fatally." The case, we are told, was under the direction of men "of professional consequence."—Crito, with an appearance of pleasantry, now goes on to observe, "Had the Derbyshire Practitioner been called, he would have obliterated the artery by a single pull." What the Derbyshire Practitioner might have done, he cannot say, but though himself of no professional consequence, he can assure Crito, that it would be a matter of painful consideration with him, to have a case of wounded ulnar artery simply, terminate fatally.

#### A PRACTITIONER IN DERBYSHIRE.

October, 11, 1807.

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### *To the Editors of the Medical and Physical Journal.*

*Remarks on the London Museum, Brydges Street,  
Covent Garden.*

GENTLEMEN,

FROM reading Mr. Parkinson's observations on the British Encrinites, and other mineralized remains of the organic world, inserted in one of the magazines of last month, I learn with infinite pleasure that the Institute of Natural History, established in the metropolis last April, still remains open to public inspection. This was originally proposed, I recollect, to be open only during the spring season annually; and as I reside in Scotland, the total silence of the literary journals and channels of scientific intelligence, respecting it, led me to think it must be closed, till accidentally taking up a magazine of last month,



month, I was convinced to the contrary; and then, I must say, I felt some astonishment that it had so long escaped the notice of your interesting Miscellany.

As an admirer of the works of Nature, I should consider myself wanting in candour to withhold my tribute of approbation from such a noble undertaking, or to neglect any opportunity, should it be necessary, to direct the attention of the curious to this Museum. The endeavour to establish such a National Academy of the Natural History of the Country, is entitled to every praise we can bestow, and reflects so much credit on the liberality, judgment, assiduity, and laudable spirit of Mr. Donovan, the proprietor, that I am sure every one must agree with me in considering it one of the greatest and most successful attempts ever made in this country for the promotion of Science.

When I was in London, early in the summer, my visits to this Museum were frequently repeated, and I always saw it with additional delight and pleasure. From my attachment to Natural History in general, I have at various times had an opportunity of seeing almost every Cabinet and Museum, public as well as private, of any celebrity in this country; and I am confident in saying, that so far from any one of these being comparable with this, the whole of them, added together, would not form a collection of British Natural History, by any means so extensive, valuable, or instructive. I consider the divisions of birds and fishes the only perfect collections known. The organic remains of the ancient world consist of the most illustrative specimens; and I cannot help observing further, in every other department, objects of the greatest variety occur. Considering as I do the present collection to be enriched with the choicest British productions of natural curiosity in the animal and mineral kingdoms, obtained at the dispersion of the Leverian and other great Collections, (with which I was well acquainted) besides thousands of valuable and inestimable articles, I have never seen the like of elsewhere, have no scruple in saying it would be impossible at this time for any Collector, possessing the most unwearied attention, sanguine wish, and unlimited purse, to form another Collection equal to that now before the public, under the appellation of the London Museum.

The observations I have offered, may, and no doubt will, dispose others to enter more largely into the plan and  
merits



merits of this Institution, and which, for the benefit of Science, ought to be made better known.

I am, &c.

Oct. 5, 1807.

J. LASKEY,

Captain 21st Militia, Edinburgh.

*To the Editors of the Medical and Physical Journal.*

GENTLEMEN,

HAVING seen my name quoted in your Journal, (p. 557, No. xciv.) as authority for the virtues of the roots of the *Geum rivale*, I beg leave to inform you, that I never made any trial of that plant. The roots of the *Geum urbanum*, in decoction, mixed with milk, I have known servicable in fluxes, and their powder, I believe, will be found at least as efficacious as that of many specimens of Peruvian bark, so called, which are to be met with in this country. These remarks I recollect to have made to some of my medical friends, who (with the mistake of the species) may have furnished them to the ingenious Compiler of your *Indigenous Botany*; a work, to which I should be happy to contribute any thing which might be worth communicating. Similar observations on the virtues of the roots of *Geum urbanum*, I need not inform him, occur in many writers. The roots afford a pleasant tincture.

I am, &c.

ROBERT PERCIVAL.

*History of a Case of Tetanus, in which large Quantities of the Tincture of Cantharides were ineffectually employed.*  
By JOHN REDMAN COXE, M. D. of Philadelphia.

ELIJAH DUNN, aged fourteen years, was admitted on the 7th of June of the present year, into the Pennsylvania Hospital, for an injury just received by a fall from a horse. A wound on the inner side of the right tibia, nearly two-thirds the length of the limb, and of considerable depth, together with one on the outer ankle of the

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the left leg, but little more than skin deep, formed the extent of the accident. Both wounds were dressed with sutures and adhesive plasters, to favour union by the first intention. No fever or inflammation supervened; and the pain, considering the extent of the injury, was moderate. As he was bound in his bowels, on the 9th he took an ounce of Glauber's salts, which operated plentifully. The wounds were examined on the 13th, but no union was observed, and the discharge was profuse but not purulent.

On the 14th, one drachm of bark, with ten drops of *elix. vitriol.* were ordered to be taken three times a day; and the wounds were dressed morning and evening with poultices sprinkled with laudanum. By the seventeenth, the wounds assumed a more healthy appearance, granulations began to rise, but were soft and rather of a pallid hue; the discharge was thin and white, and a cicatrix had commenced. At this time he observed a difficulty of moving his lower jaw, but gave no information of it until the 18th, when the bark and vitriol were omitted, and one grain of opium was ordered three times a day, with a quart of white wine in the twenty-four hours. The disease seemed stationary till the 20th, at which time he opened his mouth with difficulty, and complained of stiffness of the muscles of the neck and abdomen, (which last were now nearly as unyielding as a board) with slight spasms through the day. The wine appeared to exhilarate, and keep him free of that violent pain at the *scrobiculus cordis*, in general so severe in tetanic patients. The opium was now increased to a grain every two hours, and the wine ordered *ad libitum*. Spirit of turpentine was applied to the wounds, but excited no pain. It was then applied boiling hot, and even mixed with salt once or twice with scarcely a sensation of pain. In the evening all the symptoms had increased: thirty drops of tincture of *cantharides* were now given every hour, till he had taken four doses, when violent pains of the stomach, and strangury, rendered its exhibition improper. The symptoms abated from the time this effect took place; but a tightness at the region of the stomach continuing, induced me to order a mustard poultice, with relief. *Cantharides* in powder were applied to the whole surface of the wounds, in hopes of exciting a more vigorous action in the languid vessels, but without effect. The pulse was increased in frequency, but diminished in force.

21st. The symptoms of strangury, &c. no sooner subsided, than the tetanic symptoms recurred, with permanent



ment contraction of the muscles. The pulse beats 120, and weaker, and a degree of risus sardonicus exists. The jaws were close contracted,\* and the head was drawn considerably backwards. Ordered to apply flour of mustard to the sores, and take every two hours ten drops of tr. cantharides in a glass of wine. Continue the opium every two hours, and inject at the same interval of time, thirty drops of laudanum in two ounces of wine diluted with water, up the rectum. If no effect is produced by the mustard, apply the butter of antimony to the sores.

22d. The butter of antimony was partially applied last night, and repeated this morning; the pain was considerable, but the action of the vessels was so torpid, that the slough was not separated for several days. The symptoms have abated. About three pints of wine have been taken by the mouth, and in the injections, and about ʒij. of tr. of cantharides, producing a slight strangury and pain of the intestines. He had one considerable convulsion last night, after which he slept a little.

23d. Last evening had a violent convulsion. His pulse is fuller, and his face is flushed apparently from the wine taken. In swallowing his medicines, &c. he is obliged to be turned upon his belly, resting on his elbows, his head being drawn backwards considerably; and he is obliged to swallow slowly, to prevent a regurgitation of the fluid through the nostrils. He cannot now take the solid opium, I therefore ordered fifteen drops of laudanum every two hours in his wine; and as he has had no stool since the 19th, the wine injections were omitted for the present, and a common purging enema was administered. He passes his urine more frequently, but in smaller quantity, and high coloured, with some scalding; it is, however, under his perfect controul. The sores are tender, with a slight discharge. Continue the wine and laudanum, and increase the cantharides to thirty drops. If the strangury is not increased by the evening, apply a large blister to the region of the pubes. His food is chiefly panada, made rich with wine.

24th. The rigidity of the muscles is now universal, tho' he suffers but little pain, except when a violent convulsion  
seizes

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\* Although his jaws were closed when awake, yet in sleep a complete relaxation of the muscles took place, the jaw falling upon the breast. But the tongue, which was perfectly still when awake, was, during sleep, in a constant state of spasmodic action, resembling the motion of the tongue of a snake. This was not, however, invariably the case,



seizes him, when his cries may be heard at a considerable distance. His mouth is opened with difficulty, and he bites his tongue frequently during sleep.—Pulse 108; he slept tolerably, the glyster operated well yesterday, and the wine injections were resumed at five P. M. He does not retain them well; I therefore ordered them in diminished doses; viz.  $\frac{3}{4}$ ℥. of wine and as much water, with forty drops of laudanum. About a quart of wine has been used since yesterday. The blister was applied as directed, and rose well with considerable pain, but no increase of strangury. Ordered fifty drops of tr. of cantharides, and thirty of laudanum every two hours.

25th. Butter of antimony was applied this morning over the whole extent of the sores, producing great pain of short duration; skin is generally moist, and he appears slightly better, opening his mouth wider.

26th. Half past nine. The symptoms were aggravated; about five last evening a violent convulsion seized him. He does not take as much wine as is desirable. Slight spasms attack him every five minutes; a miliary eruption has appeared, chiefly about the neck and body; pulse varied much during the day, sometimes full and slow, at others, weak and frequent. Pledgets of linen constantly wet with brandy were applied to the sores. A glass of wine was ordered every hour, and the tinctures of cantharides and opium as before. If no effect occurs by noon, give fifty drops of laudanum every hour with the wine, and fifty drops of tincture of cantharides. Increase the laudanum in the glysters to fifty drops.

By noon the increased doses were commenced, and persevered in, till he had taken about four hundred drops of laudanum and as much cantharides, and half the quantity by injection. At six P. M. a violent convulsion attacked him, lasting half an hour, and he began to grow comatose, with now, (8 P. M.) a degree of stertorous breathing, and that extreme irritability produced by laudanum, awaking if touched, in convulsions, and affected with frequent tremors. No relaxation of the jaws; the pulse is good. Ordered to omit all his medicines; to apply a large blister over his head; and if the symptoms of coma, &c. increase, give  $\frac{3}{4}$ ℥. of white vitriol, and as much ipecacuanha in divided doses, to excite vomiting. Should the convulsions increase, by ten o'clock, dash over him two buckets full of cold water, and repeat it if serviceable, every two or three hours.

27th. 10 A. M. Blister drew well. The attendants



kept him constantly awake; and in a few hours the effects of the laudanum subsided, though he yet continues very drowsy. The jaws are still close; but on the whole he seems better. He makes water often, but in small quantity, with some scalding, and high coloured, which is all the tendency to strangury that has occurred since the first doses of cantharides. The tr. of cantharides was again resumed in doses of *one hundred drops* every hour, until by six P. M. he had taken *one thousand drops*, *without the slightest effect apparent*. It was therefore discontinued altogether. Wine was ordered *ad libitum* in the evening, and fifteen drops of oil of amber to be given every hour, augmenting each dose: he took but one dose, as he said it nearly strangled him, and would not try a second.

28th. This morning he began early the use of volatile alkali in doses of five grains every hour: three or four doses have been taken without any visible effect. He had one violent convulsion last night and two this morning, at other times remaining free of pain though quite rigid, and having frequent twitches of the muscles. The sores are more inflamed around the edges, with considerable pain when touched, the sensibility appearing to be perfectly morbid. During the night the urine came away involuntarily. He has now, however, the complete command of it. I now determined to try cold water by affusion, in which I was sanctioned by Dr. Rush, who came in at this period; his pulse was 104, and tolerably vigorous. At noon a bucketful of cold water was poured through a cullender over him as he lay in bed, on an oil cloth, and he was suffered to remain in it for two minutes, before he was wiped: he said it felt cool and comfortable; the rigidity of the muscles appeared to abate, and a glow of heat succeeded. The eruption noticed on the twenty-sixth, had now extended itself to the thighs. I ordered the cold water to be continued every two hours, increasing the coldness and quantity if it proved useful. These favourable symptoms continued for about half an hour; but the disease appeared to return with redoubled violence, especially on attempting to drink, which nearly strangled him, and prevented the use of any thing but a little wine. The use of the water was suspended. At eight P. M. the pulse flagged considerably: I ordered the wine to be continued *ad libitum*, with thirty drops of laudanum every two hours; to rub in  $\text{ʒss}$ . of strong mercurial ointment every hour into the thighs, and five grains of calomel every two hours into the gums.



29th. The laudanum last night gave him almost immediate relief, and he dozed, without spasms, during the night, being awakened regularly to take his medicines. Butter of antimony was applied last evening, but only partially, as it gave him exquisite pain, and appeared to augment the spasms. The sores have a sloughy appearance; continue to wet them with the spirits. The eruption has increased since yesterday, some being of the size of a small pin's head and filled with a whitish matter. Urine is passed without much difficulty or scalding, in larger quantity, and less coloured. A pulsation of the heart, which was first observed three or four days ago, has become very violent, and is visible at a considerable distance from him. It was remarked to be always greatly increased during his convulsions, but it is now more uniform. The pulse both here and at the wrist beats about 112, but is strongest in proportion at the heart. He swallows with more ease this morning, and the muscles of the back appear less rigid, as the arch formed when he is turned on his face to drink is less than heretofore, and he now can drink slowly when lying on his back. His gums seem slightly affected by the mercury, of which he has taken about 3*ss*. and nearly half a pound of the ointment has been faithfully rubbed in.—As he had had no stool since the twenty-third, I ordered a common glyster, which operated once very copiously, with apparent benefit, the spasms recurring less frequently, and he can open his mouth nearly one half inch. The muscles of the body generally, are more relaxed, so as to give great hopes of a favourable issue. I prescribed thirty drops of laudanum every hour, to continue the ointment every two hours, and desired the calomel to be omitted.

At 2 P. M. there was a remission of all the symptoms, and he seemed apparently better than he had been since his first attack; his spirits were high, and he eat voraciously. Appearances continued thus favourable till about 6 P. M. when in the act of drinking, a most violent convulsion seized him, in which his body was bent nearly into the form of a semicircle backwards; the muscles of the neck were particularly affected. This convulsion lasted without any abatement for about an hour, his face becoming very livid, and respiration very torpid; the pulse at the wrist being scarcely perceptible, whilst the convulsive motion of the heart was greatly augmented; and at seven o'clock death released this unfortunate victim from his accumulated sufferings.



## DISSECTION.

At 10 A. M. of the thirtieth, fifteen hours after his decease, the body was opened, the muscles remaining still rigid, though several purple blotches over the body and extremities, appeared to denote the tendency to putrefaction. The abdomen was much distended from flatus in the alimentary canal. The adipose matter was very small, the foetus considerable. Of the omentum, scarcely any thing remained but a thin transparent membrane. The stomach externally was sound, but internally were several small appearances of inflammation, especially near the pylorus. It contained the panada he had last taken, mixed with mucus, in amount about three-fourths of a pint. The spleen was altered slightly in its colour, being of a deeper leaden hue than natural. The liver was sound; the gall-bladder large, and distended with yellow bile, which had tinged the adjoining parts very considerably. The kidneys and ureters were sound; and the bladder, containing about two ounces of urine, was contracted, and its coats thickened, especially at its fundus. No inflammation appeared in it. The thoracic viscera were sound, except the heart, which appeared to be smaller than usual, and to be still under the influence of that spasmodic action which existed so powerfully in his last moments. The *cardiac columnæ* especially appeared to be in a state of strong contraction, being permanently rigid, with none of that flaccidity, which might have been expected so long after death had taken place. The blood was not in coagula, but dissolved like molasses, as in animals killed by lightning, appearing to indicate, that the whole muscular fibres of the arterial system had partaken of the general spasmodic action.

On examining the throat, &c. the *œsophagus* was perfectly sound, but the *epiglottis and trachea* were highly inflamed, especially the last, increasing in redness as we approached to the lungs.

In the course of the disease, the patient took about 2400 drops of tincture of cantharides, about 2000 of tincture of opium, besides the quantity used in the glysters, and nearly three gallons of wine.

I do not recollect any case recorded of dissection after death from tetanus. It remains therefore to be ascertained by future observation, whether inflammation of the trachea always exists. From the neck being a part generally first affected in this disease, we might *a priori* judge this  
to



to be the case. One circumstance to be remarked, however, is, that in the above case no difficulty occurred in swallowing fluids, (except that only a small portion at a time could be taken,) which might not have been expected, considering the highly inflamed state of the adjoining parts.

As all the muscles partake of the spasmodic action of this disease, even the bladder, intestines, and heart, may we not reasonably conclude, that the arteries partake in common of the same state, in a greater or less degree? Will not this state of the arteries account for the apparently weak and quick pulse, which is common in tetanus, and which is seldom excited to febrile action and fulness, even by the largest doses of wine and laudanum? And may we not hence also explain the great tendency to solution of the blood, which is noticed in this disease? What would be the effect of bleeding in small quantities, and gradually increasing the quantity drawn, in removing this spasmodic state? Would not a vigorous action of the vessels be thereby excited, and an inflammatory crust produced on the blood; as has been observed in some very malignant cases of fever, where the depressed pulse and dissolved blood have gradually given way to violent action and sisy blood, requiring a continuance of the use of the lancet with greater freedom, to subdue this more active, though less dangerous state of fever?

Is it not probable that the strangury (except in the very first instance) was owing to the disease, and not to the medicine taken, as it was always very trifling, even under the large and repeated doses of the tincture of cantharides? And has not this medicine rather proved beneficial by the inflammation it excites in the stomach and bowels, than by its action on the urinary organs? for otherwise we must suppose the strangury from the medicine and from the disease to differ greatly in their effects upon the system.

August 1, 1804.

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*On the Use of Blisters in checking the Progress of Mortification.* By P. S. PHYSICK, M. D.

[ Extracted from the Philadelphia Medical Museum. ]

THE practice of curing erysipelatous inflammation by the application of a blister over the inflamed part, originated,



ated, as far as I know, with the late Dr. Joseph Pfeiffer. From having employed blisters in the treatment of that complaint with great success, I was induced to suppose, some years ago, that they might also be used with advantage in arresting the progress of mortification.

The first opportunity I had of applying a blister with this intention, was in the case of Captain Stokes, a gentleman between forty and fifty years of age, whom I was desired to visit, in consultation with Dr. Rush, in January 1803. After an inflammation about the anus, which had been supposed for several days by the patient an attack of piles, a mortification was observed to have commenced in the perineum, and on the side of the scrotum. At my first visit I proposed the application of a blister, to extend from the edge of the mortification in the perineum, backwards over the buttocks. This being agreed to, was immediately applied. The following day, when the blister was dressed, we were both well satisfied with its effect, as it had prevented the mortification from spreading backwards; but so extensive was the mortification of the skin and anterior part of the scrotum, which appeared to extend upwards in the course of the spermatic chords towards the abdomen, that his recovery was not to be expected. After a few days he died.

Dr. Rush being struck with the good effect of the blister in the preceding instance, has lately employed the remedy in a case of mortification, the history of which is contained in the following letter.

“ DEAR SIR,

“ I WAS called upon by Dr. Bleight, on the 29th of last July, to visit with him, Captain R. A. who, in consequence of applying a handful of the *polyconum persicaria*, instead of paper, to a common use, after going to stool, was affected with an inflammation in the extremity of the rectum, which extended around the adjoining parts, and along the perineum, so as to affect the integuments of the scrotum. Bleeding and other depleting remedies had been used to no purpose, in order to cure it: a partial mortification had taken place. I concurred with Dr. Bleight in advising leeches to the sound parts; and recollecting the high terms in which you spoke of the efficacy of blisters in preventing the progress of mortifications, in our consultation, in the case of Captain Stokes, in January 1803, I advised their application to all the diseased parts which had not put on a gangrenous appearance. They had the wished-



wished-for effect; the mortified parts were afterwards cut away, or gradually sloughed off; and, under the faithful and patient subsequent attendance of Dr. Bleight, the Captain happily recovered, and now enjoys his usual health.

“ In the most dangerous state of his disease, we gave him bark; but its distressing effects upon his system obliged us to lay it aside.

“ From, dear Sir,

“ Your sincere Friend,

“ BENJAMIN RUSH.”

DR. P. S. PHYSICK,  
Nov. 15th, 1804.

On the 24th October 1804, I was desired to meet Doctors S. P. Griffiths, Wistar, and Strattan, in consultation, concerning the case of Mr. Charles French, who was afflicted with a mortification of the foot, which was advancing daily upwards, unchecked by the liberal use of the bark. On the 27th October, I proposed the application of a large blister round the leg, below the knee; this being agreed to, was applied in the evening; when dressed the next morning, it was observed that the mortification had not increased:—encouraged by the benefit derived from it, I proposed on the 29th, the application of a second blister, to cover all the living parts below the edge of the first. This blister also rose well;—in a few days a distinct line of separation between the living and dead parts was observed; the blisters were dressed with a mixture of basilicon and spirit of turpentine. I avoid relating further particulars of this case, as Dr. Griffiths proposes to publish a circumstantial detail of it.

Since writing the above, I have been favoured with the following history of a case from Dr. Church, containing additional testimony in favour of the use of blisters in arresting the progress of gangrene.

“ On Monday, ——— of November, I was desired to visit Mrs. Y. in the country, about sixty years of age, of a fair complexion, and delicate constitution; has had several children, and heretofore enjoyed good health.

“ She had been taken on Saturday with frequent chills, with irregular febrile flushings, pain in the limbs and head, which continued increasing for nearly thirty-six hours before I saw her, when she was delirious, with flushed countenance, irregularly frequent and intense pulse, tongue furred, respiration frequent, with great general uneasiness.

“ The



"The loss of ten or twelve ounces of blood, with a saline cathartic, abated in some degree the febrile symptoms. The delirium still continuing, in the evening, blisters to the wrists, with a continuation of the saline mixture, produced an alleviation of all the symptoms, so that towards morning she had a few hours sleep. When she awoke, she was perfectly collected, complaining of great soreness in her body and limbs, particularly in one ankle, which she said was painful; her skin was cool, and her pulse frequent but soft, easily yielding to the least pressure. The family informed me that the ankle she complained of, had had an ulcer on it for fourteen years, which had been brought on by a slight injury after one of her deliveries; that it had within the last two weeks been healed. On examination, the ulcer appeared to have been of the size of a dollar, above the internal ankle, which was now quite livid, with some swelling around the edges, having the appearance of a vesication, and a deep purple blush, extending an inch or two beyond it, attended with a distressing burning sensation. The leg at this time was quite cool and somewhat swelled.

"The medicines she had been taking were omitted, and the tonic cordial plan substituted: the bark, wine, and opium were administered freely, and cataplasms of bark with yeast, were applied to the part, and changed frequently.

"This treatment was followed until Thursday, with an increase of the lividity and vesications on different parts of the ankle, filled with a bloody-coloured fluid.

"On Thursday the appearances were indeed unpleasant; the lividity of the ankle had extended, and the deep purple colour of the skin was near the middle of the leg, with very great tumefaction. The pulse was frequent, skin cool, tongue dry, and much apparent insensibility of the limb. The bark was still continued internally, and the fermenting cataplasm of powdered carbone, with meal, honey, and yeast, was applied in large quantities over the part affected, and was repeated or changed very frequently. This plan was originally adhered to all Thursday and Friday, changing the bark (which now had been taken in such quantities as to sicken the stomach) for some other tonic.

"The deep and burning redness, still, however, progressed towards the knee, with an increase of those unpleasant vesications; the pulse on Saturday was much more frequent; the skin cool; tongue dry, and covered with



with a dark-coloured crust; very great restlessness, with constant incoherent muttering.

"In this situation I recollected a conversation I had had some time since with Dr. Physick, in which he mentioned the good effects he had experienced from blistering, in a case of gangrene. The critical and dangerous state of the patient required something to be promptly done. The blister was proposed with considerable hesitation, as I could not recollect in what stage or what species of gangrene Dr. Physick had used it.

"A large blister was, however, applied on the inside of the leg below the knee, one part on the healthy portion of the leg, and the remainder immediately on the diseased part. After twelve hours it rose very well, and, contrary to what I dreaded, assumed a very pleasing aspect, and without the least increase of disease. The pulse still continued frequent and the skin cool, although the patient in every other respect was much more composed.

"On Sunday, the leg was much more favourable; the lividity and vesication had not increased, and the tumefaction, which was very considerable, had subsided much. The foot, though much swelled before, did not, until this period, shew the least disposition to take on diseased action. It now became covered with the deep purple shining appearance, with a distressing burning sensation, which, together with the increased tumefaction, occasioned much uneasiness. The bark, with elixir of vitriol, was persevered in freely, and from the pleasing effects of the blister, in arresting the rapid progress of the disease in the leg, I applied a large one, covering all the upper part of the foot, including that part of the ankle where the disease first began. The effects were equally as pleasing as in the first instance, producing an almost immediate cessation of the progress of the disease.

"The parts of the ulcer where the disease first began, separated to some depth; the cuticle from below the knee separated, and in some places on the leg; and the separation extended even through the cutis and adipose membrane.

"The tumefaction of the leg gradually diminished, and the patient is completely free from every danger."

Impressed with an idea that blisters will be often found useful in preventing the progress of mortifications, I have been induced to publish the preceding cases as early as possible.

*Philadelphia, 24th November, 1804.*



*An Account of the Effects of LABOUR in the Cure of Pulmonary Consumption. In a Letter from the Rev. Dr. SAMUEL K. JENNINGS, of Bedford County, Virginia, to Dr. BENJAMIN RUSH.*

DEAR SIR,

**T**HAT theory only is to be considered a rational one, which is supported by facts, and will admit of the most extensive practical utility. If the following facts can be of any service to you, it will afford me singular satisfaction to have communicated them.

I myself furnish the case. My maternal grandmother, my mother, five of her sisters, and four of her brothers, my sister being my mother's first child, and a brother next in succession to me by birth, all of them have been swept off the stage of life in the course of my recollection, by the fatal disease Phthisis Pulmonalis. From my youth up to the age of twenty-nine, I was sensible of great debility of the lungs, and was never, during that time, able to call aloud, read, or sing, with the ease which is common to other people. I had generally lived a studious and sedentary life, except that I had been the two last years engaged partially in the practice of physic. An offer was at that time made me to take charge of an academy. For the sake of gaining more leisure for the purpose of reading and study, I accepted the offer. In the mean time I had been three years occasionally employed in speaking upon religious subjects. From this last engagement I considered my lungs to have gained some strength. It followed, however, that study and confinement did less agree with me than formerly. I could perceive a daily declension; and at length, having been caught in a moderate rain, I was seized with a very severe and obstinate cough. I was bled again and again to no purpose. After considerable depletion, opium was tried, but in vain. Debility, the cough, and every inflammatory symptom increased. I had recourse to riding, took a journey of several weeks, and continued to let blood as often as the pains were severe, but still in vain. In the mean time I obtained your Inquiries, and immediately turned my attention to the subject which most concerned me. After having carefully read that part of the work, I pursued the following plan, viz. I let blood, moderately, every third day, especially if affected  
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with inflammatory symptoms, until, with the previous blood-lettings, I had been bled fifteen times in the course of five weeks. By this time I was much reduced, but my cough was no better. I then had recourse to the use of the *AXE*, and to *LABOUR* of the severest kind. I could not at the time repeat ten strokes without rest. It would seem in the first instance to increase my cough. The result was, that in two weeks I was nearly recovered. Finding much amendment, I grew remiss in my labour, and in a few weeks relapsed, and was nearly as ill as before, for I lost ground rapidly in the second instance. Two bleedings and similar *LABOUR*, however, finally restored me to good health, and I can now sing aloud, and on a sharp and high key; can speak two hours together; and, in one word, I consider myself freed from every symptom of that disorder.

My wife furnishes a second recent case. Her mother, and one of two only sisters, have died of the same disease very lately. She was in her youth an active and industrious woman, and of course took a good deal of laborious exercise. But for several years past she has been declining, so that, from a fleshy and healthy woman, she became a pale, sickly, emaciated, valetudinarian. The last summer she brought a fine son. By suckling him she declined in an unusual degree; was at length taken with a cough, chills at noon and in the evening, night sweats, &c. I bled her as often as I could find her pulse tense; advised her (contrary to her inclinations) to use *SERVILE LABOUR*. She took my advice. Her cough is nearly removed, and I have no doubt but she will recover.

I should not have considered these cases of sufficient importance to call your attention, had it not been for the hereditary circumstances attending them.

In my own case they are indeed striking, for not only the persons named above, but a number of my maternal cousins have died of the same disease.

I shall offer a short reflection or two, drawn from my own case. In the first place, I am persuaded that hard labour, if employed in an early stage, can cure the hereditary predisposition in some cases. Hence I further conclude, that consumptive parents ought never to choose sedentary or light employments for their children.

Secondly, I conclude, that although a trotting horse may afford sufficient exercise for many, yet labour will be far more successful.

And



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And lastly, in all cases, the labour should be such as to require considerable efforts on the part of the patient. I laboured *continually*, and rarely with sufficient intervals to refresh myself by rest.

I am sincerely,

Sir, your most obedient,

SAMUEL K. JENNINGS.

October 25th, 1804.

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*Dr. DEWEES's Examination of Dr. OSBORN's Opinion of the Physical Necessity of Pain and Difficulty in Human Parturition.*

**D**R. OSBORN, in the introduction to his essay on laborious parturition, has endeavoured to prove, that pain and difficulty are natural to woman in parturition. He conceives, "that in sorrow shalt thou bring forth children," was a curse pronounced by God against man, and that it was his intention it should be fulfilled and continued as long as the world endured. That this curse was felt and perpetuated, by the erect form which he gave man; while the horizontal one of the subordinate quadruped exempted it from these evils; he also supposes, "the peculiar advantages of position so different from each other, can no more exist in the same creature, than the strength of the dray-horse and the fleetness of the racer, can be united in the same animal: as these depend on qualities incompatible with each other, and which cannot exist together in the same subject, so those depend on circumstances of structure, or physical laws, equally incompatible and inconsistent."

From this it would appear, first, that God intended that woman should bring forth with pain and difficulty; and secondly, that this intention was answered by a physical peculiarity, *that is*, an erect form. From these positions I must dissent. God, in giving the erect form to man, could not mean it should serve as a balance, to the disadvantages resulting from it to the female; he intended man for the most perfect, and the most powerful animal; he gave him faculties, capacities, and appetites, different from all others; he gave him the erect form as the most dignified, and the best calculated to display and improve those transcendent advantages. It would indeed be limiting the power of the DEITY, to suppose, that a mechanism so elaborate, and so perfect



perfect as that of man, was necessary to effect a curse (as Dr. O. believes it) so limited. Had this been the intention of God, why should not the male participate in its disadvantages? or, in other words, why should the female alone incur the penalty? since the Doctor himself admits, that, except for this, the erect form is a mark of pre-eminence, and a blessing.

Besides, the physical necessity of pain and difficulty is by no means proved, by the text he has brought forward to demonstrate it. For, "in sorrow shalt thou bring forth children," does not necessarily imply, they shall be brought forth with pain and difficulty; for sorrow is, in no one instance in the holy writings, made synonymous with pain or difficulty; in no one instance is it made to signify corporeal sensation: on the contrary, it is invariably used to express a certain painful state of mind. I therefore believe, it was only intended to express the anxiety every woman feels for her own safety, and for that of her infant, at the interesting moment of her becoming a mother. This state of mind is inseparable from the pregnant woman; the joyless savage on the banks of the Oroonoko, is not more exempt from it, than the enervated female of civilized society. When she reflects on what uncertain tenure life is held, that one half, or more, of the human race is doomed to certain death before they arrive at maturity; the variety of accidents, as well physical as moral, the heir of man is exposed to, she sorrows, and "in sorrow" she brings forth.

This I conceive to be the true meaning of the text quoted by Dr. O.; for were it otherwise, and made to signify pain and difficulty, it would necessarily imply punishment; this punishment ought universally to obtain, agreeably to the intention with which it is said to have been inflicted: but this is not the case; we therefore cannot suppose it was intended as a punishment. On the contrary, it is more than probable that pain and difficulty are artificial, and are the consequences merely of civilization and refinement. For the human constitution, when not under the influence of these causes, will, *cæteris paribus*, be found capable of meeting and overcoming, without any difficulty, the ordinary changes produced by gestation and delivery. Of this, abundant proofs might be given; for the female savage, wherever found, whether under the scorching heat of an African sun, or beneath the rigorous sky of the unfriendly Labrador, brings forth her young, without the assistance of *acoucheur* or midwife; but the  
reverse



reverse of this almost universally obtains among the females of the civilized world; these differences are most probably occasioned by the changes produced on the human constitution, by civilization and refinement.

The mischiefs derived from the sources just mentioned, are found to consist in the disposition to, or existence of diseases, either general or local, or both; in those which may affect the system in general, or those which may exist in the uterus or pelvis in particular; in the introduction and continuance of certain pernicious customs, habits, or modes of life, thereby inducing a preternatural degree of inability, sensibility, laxity, or rigidity, and hence the physical necessity of pain and difficulty in parturition, among the greater part of women in a state of civilization and refinement. The difference then, in the opinions of Dr. O. and myself, consists in, what he supposes natural and unavoidable, I believe artificial and in part remediable.

I will now examine the Doctor's arguments in favour of this natural physical necessity; and if their futility or inconclusiveness can clearly be shewn, I trust my point will be established, without the necessity of much positive reasoning.

Dr. O. thinks it as incompatible to unite the advantages of positions, so different as those of man and the quadruped, as it would be to unite the strength of the draft-horse with the fleetness of the racer; yet it is well known that many women being forth children without pain, consequently the horizontal position of the brute is not exclusively the only one, in which a foetus may be born without it.

Dr. O. having laid down his favourite positions—namely, that pain and difficulty were intended by the Deity as concomitants on human parturition; and secondly, that these were effected, by the erect form of man; goes on to consider how this is brought about; “to understand” says he, “how the erect position of body necessarily operates, in making natural labour in woman more painful, tedious, and difficult than in the quadruped; it is sufficient to observe, that in such a situation, there is the general and powerful influence of gravitation to counteract, in a certain degree, during the whole period, but in a much greater degree towards the conclusion of utero-gestation; for as gestation advances, the ability in the soft parts to resist the influence of gravity, regularly decreases; and thus if not prevented, premature labour would be the inevitable consequence.”

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"Completely to guard against this accident, which is of the last importance to the existence of mankind, nature has taken particular pains, and attended to a variety of circumstances in the structure of the bodies, both of mother and child, which, while they effectually answer the purposes intended, unavoidably create those very obstacles which delay and impede delivery. The most natural of these circumstances it may be proper to describe."

"First, then, that irregular cylindrical cavity in the skeleton, called the pelvis, through which the foetus in all animals must pass, is so placed in the human body, that its axis is very different from the axis of the trunk, and of course, not perpendicular to the horizon, nor can any thing passing through it, be within the immediate influence of gravity; at the same time, the axis of the pelvis is very remote from, if not directly opposite to, the axis both of the vagina and os externum, through which the foetus must pass."

These positions are certainly true; but what do they prove? Certainly not, that pain and difficulty are inevitable to the animal so circumstanced, in bringing forth its young; but merely, that the different axis of the trunk, pelvis and vagina, are not parallel: but this makes nothing for the point, since it by no means follows, that women, to be exempt from pain and difficulty in labour, must have these axes correspond. This indeed would be a disadvantage, agreeably to Dr. O's own confession: for he alleges, that were the influence of gravitation not taken off, premature labour would be the consequence; but this end is effectually answered, by giving this variety to the axis of the parts concerned in parturition: and this, without necessarily being the cause of pain and difficulty, since we see women bring children without them; for the most perfect correspondence takes place successively, between the different axes as the labour advances.

"Secondly, upon the same principle," says Dr. O. "and with the same view, nature has been obliged to vary, nicely and minutely, both the form and the capacity of the pelvis, making it wide in one part, narrow in another, concave and deep behind, straight and shallow before, and with sides that converge to a considerable degree."

The arrangement here spoken of, though correct, I do not by any means conceive was intended for the purposes Dr. O. supposes, (namely, pain and difficulty) any more than the one just spoken of, since the same argument must



necessarily hold good in both cases, viz. women are delivered without pain, who possess all this variety in their pelves.

"Thirdly, the upper and lower apertures of the pelvis do not all correspond in their shape, and have directly opposite diameters. The superior aperture or brim of the pelvis, where the child enters, is oviform, with the long diameter extending from side to side. The inferior aperture, through which the child is to pass out, is so irregular as not to admit of a comparison, or illustration, from any known form, but is certainly shorter from one side to the other, than from the fore to the hind part; and that, in nearly the same proportion as it was longer above: thus the two apertures have directly opposite diameters."

The construction of the pelvis spoken of does not necessarily produce pain and difficulty in parturition, unless from a wrong position of the fœtus, since the diameters of the head are made to correspond with those of the pelvis; and this arrangement is essential, for the reasons just mentioned; since by it, two great objects are accomplished; first, the woman is not subjected to abortions when the uterus is impregnated, nor to its prolapsus, when empty; secondly, a resting-place is furnished to the fœtus by the hard and soft parts of the mother, whereby she is enabled to carry her burden to the most remote period of gestation, without any very great inconvenience to herself, or danger to the child.

"Fourthly, pursuing the same intention, nature has made the volume of the child's head such, compared with the cavity of the pelvis, that it cannot enter by its own weight, but requires the powerful and repeated contractions of the uterus and abdominal muscles, and even then, the head must be of a particular form, and in a particular direction; that in the passage, both these necessarily undergo a material change from compression, that the shape of the head may be, all through, adapted to the pelvis; and thus it must come out with an altered form, and in a different direction."

This argument in favour of the physical necessity of pain, &c. can have but little weight, since it amounts to no more than what we have already granted, and are again willing to concede—that, for the head to pass through the pelvis, it must have its large and small diameters correspond with those of the pelvis. This most frequently obtains, and with such uniformity, that the head might very frequently be still larger, without augmenting or producing difficulty.