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COMMON INFECTIONS OF THE HAND

by

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WITHIN the past five years, radical changes have taken place in the treatment of hand infections. Thomson and Miles in their Manual of Surgery, 1926 Edition, advised that "the incision for a subcutaneous whitlow (pulp space infection as it is called now) should be over the centre of the most tender area". Soon after that came the authoritative work on infections of the hand by A. B. Kanavel. Kanavel drew the attention of the profession to the great danger of interfering with diffuse infections, about the necessity for appropriate operative decompression of fascial space infections, and about the involvement of tendons, bones and joints if such decompression was not done early. Unfortunately the teachings of Kanavel made it difficult for most medical men to follow his advice, as the incisions recommended were too drastic and sometimes dangerous. Kanavel's successors as Bunnell, Iselin etc., advised less extensive incisions but still were too much under the influence of his teachings. Recently, however, Pilcher has recommended conservative lines of treatment in hand infections and advised that "the incision should be made where the abscess is visibly nearest the surface or over the

area of localized tenderness as revealed by examination" almost going back to the teaching of 1926. Thus the treatment of hand infections has again become conservative and rational, returning to the time honoured surgical maxim "open only if pus is present" and in this article is indicated the line of treatment and incisions at present recommended, which are all within the competence of any medical practitioner.

The main features of this new line of treatment are :—

- (a) Administration of antibiotics,
- (b) Rest to the hand,
- (c) No operation until abscess formation is certain,
- (d) Adequate anaesthesia,
- (e) Blood less field,
- and (f) The limitation of surgery to small incisions for the evacuation of pus and slough.

Administration of antibiotics :

At whatever stage the infection is seen, antibiotics should be the first part of treatment. No exception to this rule is allowed even if the abscess is ripe.

Operation should not be done until the patient has an antibiotic in his circulation. At present Penicillin is the most useful agent, and the recommended dose is 300,000 units of Procaine Penicillin, twice on the first day and once daily for 2 to 3 days. However, when operation is necessary 600,000 units of Procaine Penicillin with 200,000 units of crystalline penicillin should be injected 45 to 60 minutes before the operation. The day after the operation, 300,000 units Procaine Penicillin is given, and usually, injections are unnecessary, afterwards.

Recently at one centre, they have tried 600,000 units of Benzathine Penicillin (Benapen) in one dose at the beginning, and it has been found as efficacious as Procaine Penicillin given for 3 days. This method has advantages in rural practice in our country.

Rest to the hand :

All cases of hand infection should have their hand kept in a sling with the hand raised to about the level of the head. If there is severe infection, and after operation, a moulded plaster slab may be applied to keep the wrist slightly dorsiflexed and the fingers flexed. An infected finger bandaged in a position of extension is a common sight, and this leads to stiffness in the finger and a long time for complete recovery, and so special care must be taken to avoid this wrong position.

Time for operation :

An incision should never be made until abscess formation is certain. A subcuticular purulent blister can be recognised at once, but very thorough inspection for an abscess may be necessary when it is subcutaneous. A careful search should be made with probe or forceps for a point of localised tenderness, which will indicate where the abscess is pointing and where the incision should be made. Often the skin at this

point shows a discoloration. With an abscess of moderate size, it is possible sometimes, to detect an area of fluctuation. Delaying the operation to determine the presence of pus is less dangerous than premature incision.

Adequate anaesthesia and bloodless field :

Local analgesia can be used in all cases and is specially useful when the medical man is working alone. The digital nerves are easily blocked with local analgesics at the base of the finger, but for palmar infections, nerve blocks at the wrist are required.

All operations should be done in a bloodless field. For the finger, a piece of rubber tubing clipped with an artery forceps round the base of the finger is adequate, and this is applied before the nerves are blocked. For a digital nerve block, a subcutaneous injection of 2% procaine (Novocaine) or $\frac{1}{2}$ % Xylocaine (Lignocaine) *without adrenalin* is made on each side of the digit distal to the tourniquet (Fig. 1). Analgesia takes about 10 minutes to develop if procaine is being given, and a very much shorter time if Xylocaine is employed.

For treating infections of the palm, web and dorsum, a sphygmomanometer cuff is used as a tourniquet round the arm at a pressure of 200 mmg of Hg. and a block at the wrist is produced by injecting 2 c.c. of 2% procaine or $\frac{1}{2}$ % Xylocaine round the median nerve, the same amount round the ulnar nerve and an equal amount infiltrated subcutaneously across the dorsum of the wrist to block the radial nerve branches. The median nerve lies deep between the two tendons of the Flexor carpi radialis and the palmaris longus in the middle of the front of the palm, and the guide to the ulnar nerve is the tendon of the flexor carpi ulnaris and the pisiform bone, on the radial side of which is the nerve (Fig. 2).

If local anaesthesia is not favoured, then general anaesthesia such as ether or intravenous Pentothal may be used. Ethyl chloride spray locally is only mentioned to be condemned. Intravenous Pentothal is quite safe if injected in a 2½% solution (1 gm. in 40 c.c.) and preceded by an injection of 1/100 gr. atropine.

Small Incisions :

The incision should be made where the abscess is visibly nearest the surface. The minimum of healthy tissue should be incised. Extensive incisions lead to further sloughing and leave painful and mutilating scars. Natural drainage may be facilitated by paring away a narrow diamond of skin. Rubber and gauze drains are definitely contraindicated. The wounds may be dusted with a chloramphenicol powder (as supplied by Lepetit) and dressed with dry gauze. Rest, elevation and chemotherapy are continued till oedema subsides.

The equipment needed for treating hand infections is as follows: Syringes and needles for injections and nerve blocks; a scalpel preferably with a narrow blade; fine pointed scissors; fine dissecting forceps; a probe; artery forceps for clipping finger tourniquet; fine rubber tubing for tourniquet; dry gauze dressings; finger bandages; 3" plaster of paris bandages; slings; Procaine (Novocaine) or Xylocaine (lignocaine) ampoules; Penicillin as Procaine Penicillin or Benapen; chloromycetin Topical solution or Synthomycetine Powder; and cetavlon 1% solution for cleaning the skin prior to operation.

The common infections of the hand are as follows: Paronychia which comprises nearly one-third of all infections of the hand; pulp abscess (subcutaneous whitlow), next commonest, the two conditions together amounting to nearly half of all infections of the hand; apical abscess and the web space

abscess. Acute suppurative tenosynovitis, to which great importance used to be given formerly, constitutes only about half percent of all infections of the hand, and when it occurs conservative treatment yields good results in almost all cases.

Paronychia :

Paronychia is a subcuticular infection of the nail fold which may occur at the side or base of the nail. Pus forms early. To find the pus, the nail fold is separated by blunt dissection from the nail, a start being made at the site of maximum tenderness (Fig. 3). This manoeuvre will release the pus and after this has been mopped away the nail must be carefully examined to see if pus has tracked beneath it. If pus is found underneath the nail as can be made out by an opaque white appearance of the nail, the whole width or proximal part is removed (Fig. 4). Taking out only a corner of the nail is wrong practice as it leads to an irregular fissured nail. The wound is then dusted with the synthomycetine powder and dressed with dry gauze. Dressings can be renewed every 3 to 4 days and the wound heals up within 10 days.

Pulp Abscess :

The second commonest infection of the hand, the infection of the pulp of the terminal segment of the finger is a very important condition. In this condition, Kanavel recommended an early and extensive incision (Fig. 5) (alligator mouth incision) in the belief that tension of the inflammatory exudate in the closed spaces of the pulp of the terminal segment of the finger would endanger blood supply to the bone and thus lead to death of the bone. At present it is considered that osteomyelitis if it occurs is due mainly to the severity of the original infection and in many cases the extensive incision advised is itself the cause of the sequestrum

formation as the incision (uni or bilateral) cuts off the emergency blood supply to the bone after the main blood supply has been destroyed. Actually it was found in one hospital that the sequestrum rate was 10% when the hockey stick incision (Fig. 6) was the rule and has gone down to 1% with the present conservative incision.

In pulp infection, it is not necessary to incise the area as soon as the patient has come under observation. Penicillin and rest can be expected to produce resolution of the condition in a large percentage of cases. In other cases the above treatment causes swelling, tension, and pulsation to diminish, and the skin color changes, and when this is noted, a transverse or oblique incision is made right over the centre of the tender area, as made out by a probe. A small disc of skin, about 2 to 3 mm in diameter, may be removed right over the roof of the abscess (Fig. 7). It can be appreciated from figures 8 and 9 that drainage provided by this method is much more effective than the classical lateral "hockey stick" or "alligator mouth" incision (Figs. 5 & 6).

Apical Abscess :

The apical abscess is an abscess in the pulp at the tip of the finger and is bounded on one side by the free edge of the nail. It is difficult to diagnose this condition correctly but the fact that the tenderness is found to be localized to the tip of the finger enables us to differentiate it from pulp infection. A small spot of yellowish discoloration may usually be made out at the tip of the nail. For this condition it is necessary that the abscess is unroofed, the skin and the nail over the abscess being removed as shown in figures 11.

Web space Infection :

The web space infection is an abscess in the web of the finger and usually results from direct inoculation. There

is swelling of the web, with separation of the fingers and oedema of the dorsum of the hand. In the early stages immobilisation of the hand in a position of rest and antibiotics are essential. When localisation has taken place an incision is made over the most tender area and the usual incision should be one overlying the flexion crease at the base of the finger. This transverse incision (Fig. 12) is preferable to an incision cutting the web as the latter being linear, tends to close spontaneously. When a web space abscess extends across the base of a finger into the adjacent web space and distally along the sides of a finger, the condition should not be misdiagnosed as a mid palmar space abscess and blind thrusts proximally into the deeper parts of the palm "along the lumbrical canals" should not be made. A mid palmar space infection is very rare.

Infections confined to the subcuticular layer may occur anywhere, in the terminal phalanx or over the palm, and the treatment is merely removal of the overlying cuticle. Of course in every such case of subcuticular collection a search must be made for a track into the deeper tissues.

Subaponeurotic abscess of the palm, thenar space abscess and acute suppurative tenosynovitis mentioned earlier are all quite uncommon. A subaponeurotic abscess lies between the palmar aponeurosis and flexor tendons. This condition seldom exceeds 0.2% of all hand infections. The incision should be over the distal flexion crease of the palm and centred over the most tender area. There is no place in the palm for any longitudinal incisions as this leads to contractions of the palm. Thenar space abscesses are also uncommon. A ballooning of the thenar eminence may mean only pus between skin and fascia covering the thenar eminence, and incisions through the web or much worse, incision on the radial side of the second metacarpal, with opening up of

the thenar space, are all very harmful and should be completely avoided. In cases of sequestrum formation, as may be evidenced by a persistent sinus in pulp infections, the sequestrum must be removed only when it is completely separated and loose. Earlier treatment for removing the improperly separated dead bone may cause extension of infection.

The present day concepts of treatment of hand infections have been described.

The importance of never incising an area of cellulitis and making only the necessary small incisions at the correct time is stressed. The advantages of a nerve block and bloodless field are shown and the inadvisability of drains in the hand is mentioned. The observance of the above measures will greatly shorten the disability period in infections of the fingers and hand, which at present cause an enormous waste of working hours and much serious disability.

UNICHEM LABORATORIES

BOMBAY - 26.

UNALGEN HC. (TABLETS):-

Hydrocortisone	3.3 mg.
Dipyrone	.. 500 mg.
Vit. C.	.. 50 mg.
Homatropine	
Methyl Bro.	0.75 mg.
	per tablet.

UNI MYCETIN VF. (TABS):-

Chloramphenicol	250 mg.
̄ Vit. B. Complex & C. & K.	

For further particulars, please contact:—

Agents: M/S. GANAPATHY & Co.,

103/104, Linghi Chetty Street,

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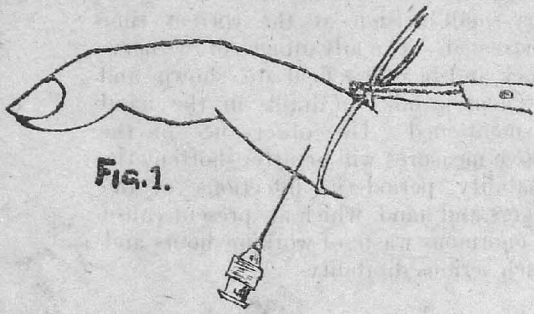


Fig. 1.

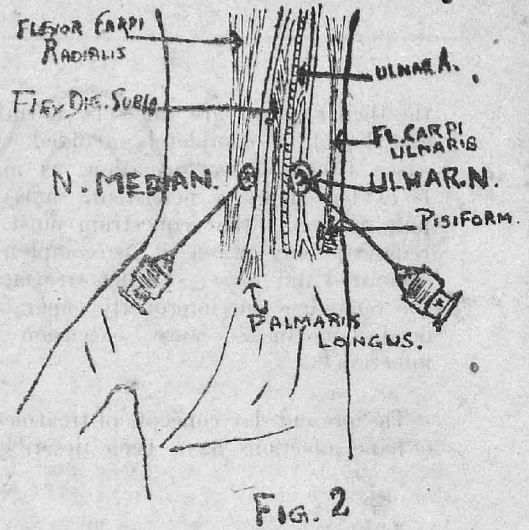


FIG. 2

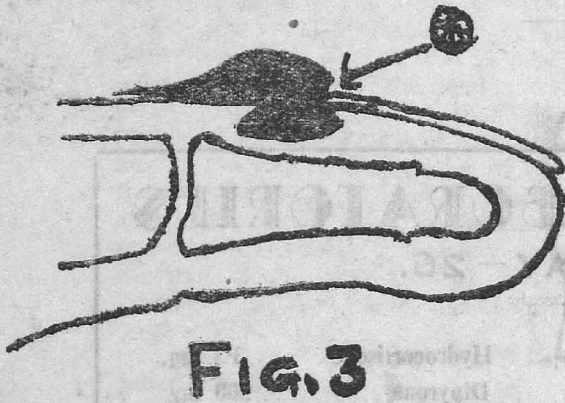


FIG. 3

Fig. 3. The arrow indicates the place in which the nail fold is separated from the nail



FIG. 4

Fig. 4. Proximal Part of nail is removed. Distal Part falls off as new nail grows.



FIG. 5

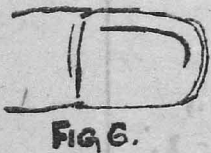


FIG. 6.



FIG. 7.

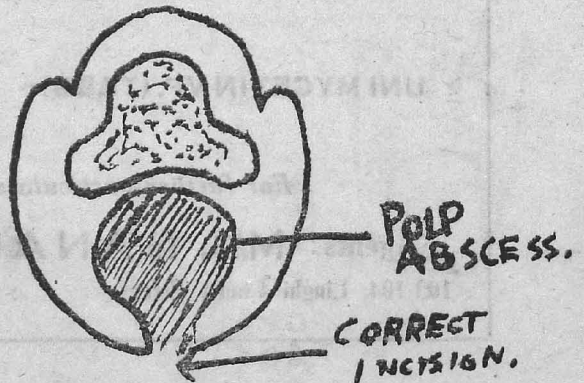


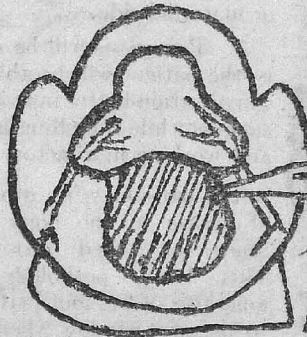
FIG. 8.

POLP ABSCESS.
CORRECT INCISION.



NORMAL
BLOOD SUPPLY
TO
BONE

FIG 9 .



{ HOCKEY
STICK
INJURY
CUTS
BLOOD
SUPPLY

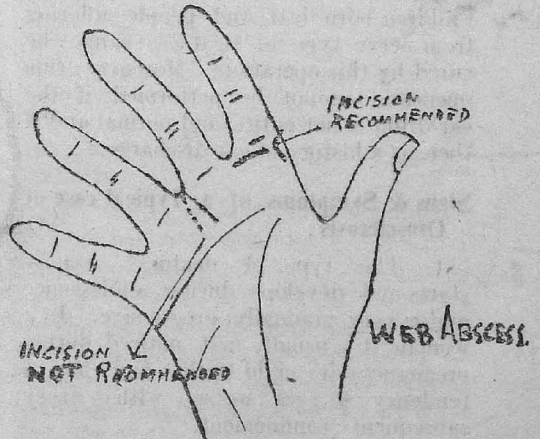
EMERGENCY
BLOOD SUPPLY

FIG 10



EXCISION OF
NAIL + SKIN
OVER
ABSCESS.

FIG. 11(a).



INCISION
RECOMMENDED

INCISION
NOT RECOMMENDED

WEB ABSCESS.

FIG. 12.

MOBILISATION OF STAPES

by

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MOST of you have read about this new operation by Dr. Samuel Rosen of New York. Dr. Rosen visited the important cities in India during December last and demonstrated this new operation for deafness. The newspapers gave a wide publicity to his visit and the success of his operation in cases operated by him. The public got the impression that this new operation, which took less than half an hour to perform, restored the hearing immediately, even on the operating table, and that within a few years, probably, there will not be any more deaf persons in this world. Thousands of people came from all the districts to see him and get operated by him during his two days' stay at Madras. It reminded me of what is said in the Bible about thousands of people flocking to Jesus Christ for the "healing touch". Therefore, I have decided to write this article for the benefit of all the general practitioners who may advise their patients regarding the scope of this operation.

Dr. Rosen's "Mobilisation of Stapes" is intended only for one type of deafness namely, Clinical Otosclerosis, for which Lempert's fenestration is being done. Children born deaf and people suffering from nerve type of deafness cannot be cured by this operation. Moreover, this operation cannot be performed if the ear-drum is not entire and normal and if there is a history of ear discharge.

Signs & Symptoms of a Typical case of Otosclerosis :

1. This type of deafness usually starts and develops during adolescence and is very gradually progressive. In a woman, it is usually first noticed during pregnancy or child-birth and has a tendency to get worse with every subsequent confinement.

2. Patients suffering from this type of deafness will have tinnitus, that is, some sort of ringing or buzzing noises in the ears.

3. Hearing by bone conduction will be better than air conduction. The patient will hear his watch better when placed over the bone behind the ear and will be able to carry on telephone conversation better than normal conversation.

4. There is usually a history of deafness in the family, on the paternal or maternal side.

5. Paracusis will be observed. That is, the patient will be able to carry on a conversation better in noisy surroundings, such as while travelling in a train or bus, and working in a factory or workshop.

The pathology in otosclerosis consists of disease in the bony capsule of the inner ear called otosclerotic process. This bony pathology brings about ankylosis of the foot plate of the stapes to the oval window when it involves the region of the oval window. Therefore, there is interference in the conductive mechanism from the exterior to the inner ear. The "cochlea", nerve of hearing and the sound perceiving mechanism are alright in these cases and once we establish the proper conduction of sound to the inner ear by surgery, the hearing is restored.

Lempert's operation establishes this conduction of sound waves to the inner ear by the creation of a new window by the side of the existing oval window which is closed by ankylosis of the foot plate of the stapes to the oval window. But to create this new window an elaborate mastoid operation has to be done first and only after that the new window can be made on the horizontal semicircular canal. So, Lempert's operation takes about 2½ to 3 hours to do and

the patient has to be hospitalised for about 10 to 15 days, during which time he will be sick with nausea and giddiness. For about 6 to 8 weeks the patient has to be under the constant care of the surgeon for the cleaning and dressing of the operated ear.

The new Rosen's stapes mobilisation operation is much simpler and takes only about half an hour to perform. The patient can walk back to his bed and has no nausea or vomiting. Only one day's hospitalisation is necessary and within a week the wound in the operated ear gets healed. In successful cases there is good improvement in hearing in the operated ear. So, the entire post operative care lasts only for a week or ten days. In this operation the conduction of sound waves to the inner ear is established by re-opening the closed oval window, that is, the foot plate of the stapes is mobilised by releasing it from its adherent condition to the oval window.

Technique of Stapes Mobilisation Operation :

Without going into the details of the

A Comparative Study of the Two Operations :

Lempert's Fenestration.	Rosen's Stapes Mobilisation
Indicated in otosclerosis, where the bone conduction is very good.	Indicated in otosclerosis where the bone conduction is very good.
The operation is elaborate and its duration is about 2 to 3 hours.	The operation is simple and its duration is only about $\frac{1}{2}$ hour.
The conduction of sound waves is through a new window made in the horizontal semicircular canal, which is free of bony pathology.	The conduction of sound waves is through the same old oval window, where the foot plate of stapes is mobilised, but bony pathology still remains.
Since the new window is created in one of the semi circular canals, the equilibrium is lost and the patient will have nausea and giddiness.	No such loss in equilibrium and the patient has no discomfort.
The chance of failure is by bony regrowth closing the new window.	The failure can be either due to inability to mobilise the foot plate during the operation or the foot plate getting ankylosed again in the course of some months.

operation, it consists in lifting up the posterior half of the ear-drum by endaural approach and with hook like instruments trying to move the stapes up and down or in and out.

There is no special pre-operative preparation of the patient for the operation and anaesthesia consists firstly in giving 2 c.c. Pethidine half an hour before the operation and injecting 2% Novutox subcutaneously in the external auditory canal at the commencement of the operation. Then the skin of the external auditory canal, is incised $\frac{1}{2}$ cm. external to the ear-drum from the 6 O'clock to 12 O'clock position, and with an elevator the skin and ear-drum are reflected and thrown forward. The incus and the stapes may then be seen immediately, but often curetting the bone posteriorly is necessary to expose the ossicles and oval window better. After mobilising, the ear-drum and skin flap are placed back in position and the external canal is plugged with sterile cotton.

DERMATOLOGICAL VIRUS DISEASES

by

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UNDER this heading the following skin diseases may be considered:—

- (1) Vaccinia. (2) Herpes. (3) Kaposi's varicelliform Dermatitis. (4) Zoster.
- (5) Molluscum Contagiosum. (6) Warts.
- (7) Orf.

I. The **Vaccinia** or Cowpox is acquired by milkers and is caused by a virus infection. The elementary body is brick like and is surrounded by a membrane like structure.

The constitutional symptoms are mild, one or more nodules vesicles or pustules may appear on the hand. Sometimes a generalised eruption may appear and heal within a week.

The Vaccinia virus has immunising power against variola.

II. **Herpes.** Aetiology:— The virus is 100 to 150 millimicron in diameter and can be grown on chorioallantoic membrane of chick.

Epidemiology:— There are two groups (a) without circulating antibodies, (b) with circulating antibodies. A newborn infant of an immune mother has circulating antibodies.

Clinical Features: There are two types mainly:— (1) primary infection without neutralising antibodies, (2) recurrent attacks with such antibodies. No. 1 is acute and produces general symptoms. No. 2 is purely local and the general symptoms are mild.

Professor McNair Scott has given the following summary of the host-parasite relationship of Herpes simplex.

Susceptible host + virus = Primary infection (No circulating antibodies).

Primary infection =

- (a) Manifest disease = local lesion and systemic illness.
- (b) Subclinical infection = No visible disease.

Recovery = Carrier state (circulating antibodies).

Carrier state =

- (a) Recurrent herpes = local lesion,
- (b) Latent infection = No illness.

The virus attacks ectodermal structures and produces involvement of skin, mucous membrane eyes and central nervous system.

The following summary gives the involvement of the various organs:—

(a) *Skin.*

1. Herpes simplex.
2. Eczema herpticum.
3. Traumatic herpes.

(b) *Muco cutaneous Junction.*

1. Herpes labialis.
2. Herpes Progenitalis.
3. Vulvo Vaginitis.

(c) *Mucous membrane.*

1. Acute gingivostomatitis
2. Recurrent stomatitis.

(d) *Central nervous system.*

1. Meningio encephalitis.

(c) *Eye.*

1. Conjunctivitis.
2. Kerato conjunctivitis.

(f) *Generalised infection.*

1. Herpes neonatorum with
herpetic rash.

Acute herpetic Gingivostomatitis. This is common between six months and 6 years. The herpes virus can be isolated from saliva. The Clinical features are irritability and red swollen gums. The regional lymph glands are swollen. Occasionally herpetic stomatitis recurs. The local lesions are similar to those described above.

Aetiology and Immunology: The disease is caused by a virus which is 100 to 150 millimicron. Antibodies in human Sera can be demonstrated with this virus.

Histopathology: (1) There are proliferation of epidermal cells some of which contain inclusion bodies. (2) Multilocular vesicles form deep in the epidermis. (3) The edge of the vesicle show ballooning degeneration of epidermal cells. The type of intranuclear inclusion bodies are known as Lipschutz bodies.

Treatment :— *External:* Zephiran 1 in 1000 (Benz-alkonium chloride).

For repeated or recurrent herpes, vaccination with herpes virus has been tried but found to be ineffective.

III. Disseminated Cutaneous herpes simplex or Kaposi's Varicelliform Dermatitis: The condition may be indistinguishable from Eczema vaccinatum. This is an acute eruptive condition due to virus of herpes simplex.

The points of difference are :—
(a) previous vaccination in Eczema vaccinatum, (b) histopathological difference.

In Kaposi's dermatitis the histopathological picture resembles that of herpes simplex. There is unilocular vesicle and epithelial degeneration. Nuclear inclusions are seen as in herpes and there are no cytoplasmic inclusions (the Guarniere bodies) as in Eczema vaccinatum.

Treatment: There is always a tendency for secondary infection and hence tetracyclin has a rightful place in the management both externally and systemically.

IV. Zoster. The incubation period is 7 to 14 days.

Aetiology: The virus measures 145 to 250 millimicrons. The clinical manifestations :—The word Zoster means girdle and indicates the commonest site of appearance on the skin of the lower thorax. The other sites of involvement are (a) Neck and shoulder due to involvement of 2nd to 4th cervical ganglia, (b) the cranial nerves.

- i. Trigeminal: Zoster ophthalmicus.
- ii. Facial: Ramsay Hunt's syndrome.

The eruptions appear as a group of vesicles and sometimes there are preceded by the occurrence of hyperesthesia pain and itching. The vesicles contain clear fluid. The vesicles are deeply situated and undergo dissolution by desiccation and crust formation — occasionally the centre becomes purulent or haemorrhagic. The average duration is 1 to 3 weeks. There appears to be two varieties of Herpes Zoster namely; 1. Primary and 2. Secondary. The latter condition follows trauma; administration of heavy metals or in Leukemia. The primary no such predisposing factor exists. Lewis believes that the skin changes are due to vascular dilatation produced by irritation of posterior nerve roots. The subsequent evidence seems to be in favour of the virus being actually

in the skin. With the aid of electron microscope the virus particles can be demonstrated in the skin.

Histopathological features: There is intraepidermal vesicle produced by profound degeneration of the epidermal cells. Two types of degeneration occur namely (a) ballooning degeneration, (b) reticular degeneration. The ballooning degeneration is more marked than reticular degeneration. The vesicles are mostly unilocular. The nuclei of the infected cells contain intranuclear Lipschutz bodies.

The complications of Herpes Zoster are: (1) Postherpetic neuralgia, (2) Paralysis temporary or permanent, (3) Secondary infection of skin lesions.

Varicella and Zoster. It is considered that varicella and Zoster are different manifestations of the same virus. The elementary bodies of both are identical.

Treatment:— External: The following medicines may be used:—

1. Burrow's solution
(1 in 20 strength)
2. Tetracycline group as ointment.
3. Superficial X-ray therapy.

Systemic treatment:—

1. Protamide is a processed denatured protolytic enzyme from hog's stomach and is given twice weekly.
2. Vitamin B 12, 1000 mcg. thrice weekly.
3. Tetracycline group of drugs orally.
4. I have found autohaemotherapy 5 to 10 cc. twice weekly to be of benefit in cases of Herpetic neuralgia.

5. Mocassein Venom is given in doses of 0.1 cc. of 1 in 3000 strength every 4th day with very good results.

V. Molluscum Contagiosum: This is a contiguous auto inoculable disease of skin characterised by pin head to peasized waxy lesions usually presenting a central depression. Dr. Von Rooyen by use of intravital staining and microdissection has found the so called molluscum bodies from the cells. The molluscum body grows from a minute form of virus and formed by diffusion of cytoplasmic constituent of cell.

Histopathology: The epidermis grows into dermis as a pear shaped lobule. There is degeneration of epidermal cells. Numerous large inclusion bodies are found enmeshed in the horny layer. The molluscum body is an inclusion body. Embedded in the gelatinous matrix are found myriads of elementary bodies.

The lesions are pin head sized elevations of skin. There are semiglobular circumscribed and firm. In the centre a dark coloured junction is seen from which milk curd like substance may be expressed.

Treatment:— External: (1) 20% Podophyllin in 95% Alcohol twice week. (2) Multiple punctures in each lesion with a clean needle. (3) Trichloroacetic acid.

Internally:— A course of Tetracycline group of drugs have been employed with benefit.

VI. Warts. (Verrucae) These circumscribed papillary growths. There is localised hypertrophy of the prickle cell layer due to filtrable virus. The following varieties may be described:—

1. *Plane or Juvenile Warts:* There are small smooth elevations and appear

commonly in the dorsum of hands and face.

Histopathology: The features are hyperkeratosis and acanthosis. There is basket weave appearance of the horny layer.

2. *Verruca Vulgaris* or *Common Warts*: They are firm elevated growths anywhere on the body but most commonly on the fingers near nailed. The diameter is about $\frac{1}{2}$ " and height is about $\frac{1}{4}$ ".

Histopathology:— A triad feature: (a) Hyperkeratosis, (b) Acanthosis, (c) Papillamatosi. The epidermal cells may show round eosinophilic bodies in the nucleus. These represent the virus inclusion body.

3. *Verruca plantaris*. They - occur usually near the ball of the great toe. They are covered by a horny plate.

Histopathology: Resembles *Verruca Vulgaris*. The thickness of horny layer is greater. There may be in addition imperfect keratinisation with retention

of nucleus, producing a condition of parakeratosis. The deep projections into corium presses on nerve ending causing pain.

Treatment of Warts: (1) 20% Podophyllin in Alcohol, better still in Tr. Benzoin Co. (2) X-ray therapy. (3) Electrocoagulation or desiccation. (4) Solid carbon dioxide application.

Systemic sodium Bismuth Triglycollamate tablets orally or Bismuth Salicylate 2 cc. injections once weekly for 12 sittings.

VII. **Orf**: Ovine contagious pustular Dermatitis occurs in many sheep rearing localities and is caused by a virus infections.

The incubation period is 3 days and the initial lesion is a red papule. There may be single or multiple lesions with regional lymphadenitis. The elementary bodies have been identified by electron microscope. The condition is self limiting and the resolution is completely within 8 weeks.

* CHEMOTHERAPY IN TUBERCULOSIS

by

Dr. M. G. NAIR, M. B., B. S.,

T. D. D. (Madras), T. D. D. (Wales), F. C. C. P. (U. S. A.), Coimbatore.

I am trying to give you in a few lines the present position of tuberculosis in our country, the current line of treatment with the Chemotherapeutic agents available at present and their limitations. Tuberculosis is a serious communicable disease which should require isolation enforceable by law. The fact that many new cases are diagnosed daily shows that our systems of control are inadequate. That our present position is far from satisfactory can be judged from the large number of open cases seen at the outpatient department of our tuberculosis clinics. We have insufficient beds in our institutions and we have no jobs to give to those who are sent out, as arrested.

In the absence of Sanatoria or hospital beds, medical care of tuberculosis patients at home is largely in the hands of private practitioners, who in our country, are unfortunately not all qualified and who do not practise the same system of medicine. Home care programmes are operating but many patients have no homes. The large number of tuberculosis patients eligible for ambulatory treatment fail to continue their treatment either at clinics or under private practitioners for want of clinics, practitioners or facilities. No diagnosed case of tuberculosis should ever be dropped from periodic examination at least for 2 years and we all know

the impracticability due to dearth of suitable jobs to offer to the ex-patient and for other considerations. Any anti-tuberculosis programme must be on a country-wide basis. There should be uniformity of medical education, and law preventing unqualified men and women practising medicine, enforced. Social service, public service agencies for the betterment of community, protected water supply, good housing conditions and sufficient tuberculin tested milk etc. should all be utilised in the programme. When the patient's capacity for work in terms of residual disease is assessed, there must be work to give and occupational training given in suitable cases.

The most important single target in pulmonary tuberculosis therapy is cavity closure. This aim is achieved by bed rest, chemotherapy, collapse measure and surgery. Bed rest is essential in any active disease and bed rest should be sensibly prescribed and combined with chemotherapy. All cases of pulmonary tuberculosis do not respond to chemotherapy. The proper assessment of the case at the outset should be made and those cases that are not amenable to a short course of chemotherapy should be subjected to Pneumothorax, Pneumo Peritonium, thorocoplasty or resection. I do not give here the various indications for the above procedure. In order of superiority in therapeutic value, the

* Reprinted from the Annual Number (1956) of the Coimbatore Dist. Medical Association,

three anti-tuberculosis drugs in present day use are 1. Streptomycin, 2. Isoniazid (I. N. H.), and 3. Para-aminosalicylic acid. There are other chemotherapeutic agents as Viomycin, Cycloserene and Pyrazinamide. I do not intend to deal with their respective values as they are all at present not used as freely as the first three. Streptomycin is not used alone. The combination of I. N. H. delays the Streptomycin resistance and the addition of P. A. S. delays I. N. H. resistance. The problem of bacillary resistance is a complicated matter. All the three drugs have side effects and some times produces serious toxic complications. The nephro and neuro-toxicity of Streptomycin and I. N. H. are really serious. The combination of the three drugs delays to a considerable extent the emergence of resistance. Those facts have to be kept in mind before chemotherapy is instituted. Almost all cases of pulmonary tuberculosis should have the benefit of chemotherapy and the earlier it is instituted, the better. Early lesions respond to chemotherapy and the more the number of the cavities and the more fibrotic the lesions, the treatment will be more difficult. The frequent utilisation of laboratory to ascertain the resistance or otherwise of bacilli to the anti-tuberculous drugs, is essential. In terms of resistance of bacilli, I. N. H. has not the same significance as Streptomycin. Some keep Streptomycin or I. N. H. "up the sleeve" so as to use it when surgery is done. I do not see much wisdom in that procedure. When indicated, all the three may be used and if the fourth drug is necessary when the bacilli have become resistant to the first three and surgery is done, Viomycin is available. Viomycin is a potent anti-tuberculosis drug but is toxic. In these rare cases when Viomycin is used due to resistance of the bacilli to the other three it is only used for a short period and then it may be given in doses of 2 grammes a day by injection or Pyrazinamide may be tried. All the

toxic reaction to the drugs occur during first three months of treatment. The chemotherapy used now are in the following combinations.

1. Streptomycin daily plus P. A. S. 20 grms per day.
2. Streptomycin twice or thrice per week plus 20 grms of P. A. S. per day.
3. Streptomycin daily plus I. N. H.
4. P. A. S. 20 grms per day plus I. N. H.

In the above combination, one sees that only 2 of the 3 potent anti-tuberculous drugs are used at a time, keeping the 3rd drug in reserve.

Streptomycin - Dihydro Streptomycin combination offer no advantage over Streptomycin alone from the standpoint of Oto-toxicity. The audio-meter testing is done with a model H. I. Audiometer and vestibular function tested by ice water test. I do not wish to go in detail the tests and the criteria for evaluating the degree of dysfunction. Certainly all the three (Streptomycin, I. N. H. and P. A. S.) are to be used in cases of miliary and meningial tuberculosis. Pleurisy with effusion is another indication for triple therapy, as unless proved otherwise all pleurisies are to be considered tuberculous in nature and treated, keeping in mind that these cases show real lack of resistance to infection. I. N. H. is usually used in a dose of 5 mgms per K. G. of body weight. I have tried in selected cases in dosage of 25 mgms per K. G. of body weight with massive doses of pyridoxine, vitamin C and Nicotinic acid and the peripheral neurities, retention of urine, constipation and psychosis which used to be a bugbear with I. N. H. therapy, never occurred in my cases. The above dosage is not accepted universally and great care has to be exercised when such massive doses

are administered. The proper selection of chemotherapy is an art. For elderly patients. Streptomycin may be avoided or even if given, given only for a short period. I. N. H. has not yet replaced Streptomycin but I. N. H. is given alone as prophylactic in arrested tuberculosis patients during pregnancy. When chemotherapy is instituted it should be uninterrupted. We do not know how long it has to be continued after all the signs of activity have subsided. One year is in my opinion the minimum period.

Chemotherapy and surgery have created new problems on patients who would otherwise have died and are now saved and enabled to live. Many cases are now being discharged from our institutions as arrested cases and it should be the responsibility of the State and of the social service organisations to see to their welfare. It is to be hoped that our government and other voluntary societies will realise the seriousness of these problems and improve the state of affairs before they become uncontrollable.

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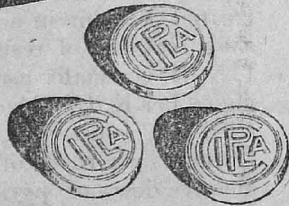


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CASE NOTES

Sheehan's Syndrome

Mrs. G., a female aged 36 years presented with the complaints of lassitude, difficulty in articulation and cough of three months duration. She was a mother of six children, the last child being 11 months old. All the pregnancies had been normal except the fourth one which had been slightly difficult. For the last three months she had been growing more and more listless, with little inclination to work and becoming very slow in all her actions. According to her husband, of late she had not been looking after her children as assiduously as before and had in fact started neglecting them. She had also noticed her speech becoming thick with difficulty in ease of expression. The difficulty was not in the formulation but only in mechanical execution. She was still amenorrhoeic and had noticed that for the last three pregnancies the return of menstruation had been delayed more and more and the last time menstruation set in only after fourteen months and even then was very scanty. The lactation too had been affected. Though normal in the earlier pregnancies, later it had become scantier and scantier until it had been very little during the last two pregnancies. As she had developed cough for the last three months she was being treated as a case of bronchial asthma. Recently she had noticed that there was a fall of the hair of the scalp. Delicate questioning revealed a lack of libido.

On examination, she was found to be a pale, well-built but plethoric female with a thick and dry skin which, however, showed no pigmentation anywhere. The scalp hair was found to be

plenty but brittle. On the other hand axillary hair was absent and pubic hair was scanty. The hands and feet were rather cold with slight non pitting oedema of the extremities. Her speech was noted to be thick and hesitant. The face wore a mask-like expression and the mental powers were slow and lethargic.

Investigations showed an iron deficiency anaemia. Water excretion test was flat without any diuresis after excess water intake. The 17-Keto-Steroids excretion in 24 hours urine was less than 0.1 mgm per cent. Insulin Tolerance Test was highly sensitive.

Based on the above clinical and laboratory findings, a diagnosis of Sheehan's syndrome was made and proper treatment was given.

Discussion :

Sheehan's syndrome or Post-partum Pituitary necrosis has been described as a definite clinical entity and is a very rare condition. The signs and symptoms of the disease are mainly pituitary insufficiency, failure of lactation in puerperium, loss of sexual function, genital and mammary atrophy, loss of axillary and pubic hair, lack of skin pigmentation absence of sweating, axillary greasiness, intolerance to cold, weakness, torbidity, tendency to hypoglycaemia and dangerous coma, a low B. M. R., very low 17 Keto-steroid excretion, Insulin tolerance test characterised by insulin sensitivity, hypoglycaemia not responding to sugar, a positive Kepler test, anaemic etc.

The aetiology of this disease is simple. It occurs in women who have had

repeated childbirths one of which may have been stormy with haemorrhages, not necessarily in the near past. It is now known that the pathological change is a pituitary necrosis thereby reducing all the hormones produced by that gland. In view of the multiple symptomatology of this disease, these cases are often misdiagnosed as hypothyroidism responding poorly to thyroid, as refractory anaemia, as super involution of the uterus, as anorexia nervosa, as hypoglycaemia, as a problem mother and even as idiopathic asthenia. Albumin in the urine may suggest nephritis and the mask-like expression parkinsonism. The terminal coma may simulate ketotic conditions. Unless the diagnosis is made and proper treatment given, symptomatic therapy will be a failure.

The treatment of this condition is pure replacement of the particular endocrine secretion which is deficient. Usually there is thyroid deficiency, testosterone lack, desoxycorticosterone (DOCA) lack and also probably cortisone lack and efforts should be made to assess the extent of each of these. Thyroid deficiency is assessed by appearance, plasma cholesterol and B. M. R. Need for testosterone is indicated by lassitude, muscular weakness and loss of weight. Extra salt with small doses of DOCA should be given to most cases. Cortisone will probably prove to be of value if there is any tendency to develop hypoglycaemia. It has been noted by Sheehan and Murdoch that full treatment brings normality to the individual in all respects. It has also been seen that subsequent pregnancy if it occurs results in a cure by stimulating the remaining in tact pituitary tissue.

Unilateral Hypertrophic Oste-arthritis

Patient A. male aged 45 years was admitted with the complaints of increase in the size of his right hand for the last six months. Slowly this involved the whole of the right arm with proportionate enlargement and thickening of

the skin of the fingers. Moderate clubbing was also present in them. In addition, certain amount of pain or uneasiness was felt in the whole right arm. The pulse on the right side was less felt than on the left side. Blood pressure was 140/80 m. m. on the right side, but 135/80 m. m. on the left side. No Horner's syndrome was present. Further investigations showed no evidence of any tumour of the lung, no evidence of costoclavicular syndrome, nor any abnormality in the vertebral bodies or pressure on the brachial plexus and vessels. Wassermany was positive and V. D. R. L. also was positive. T.P.A. was positive. Skiagrams of the various bones showed certain amount of sclerosis and thickening, of all the bones of the right half of the body with none or very little changes on the left. X-Ray of the chest showed no evidence of abnormality in the aorta. Brachial artery catheterisation was tried but not successful. Patient was given full treatment for the positive serology and his routine C. S. F. findings were unequivocal. The patient left this hospital in a more or less similar state as on admission. Three months later he reported back and there was marked improvement as evidenced by the diminution in the size of his right upper extremity. Another two months later he was accidentally seen on the road and it was found that the right extremity looked almost normal, nearly the same as the left limb. X-Ray of the long bones at this stage showed much retrogression of the sclerotic changes.

Discussion :

Hypertrophic osteo-arthritis can occur in many of the conditions which produce clubbing of fingers of a long-standing duration. Clubbing of fingers can be produced by pulmonary, cardiac, hepatic, alimentary and few other systemic diseases as well as by cerebral complications. Unilateral clubbing can be produced generally by pressure phenomena on the vessels and nerves supplying the limb. Unilateral clubbing

can restrict itself even to unidigital clubbing. This classification does not take into account the congenital clubbing of unknown origin. The pathology involved is anoxaemia due to some, hyperaemia due to others on the digits with a concomitant change in the fibrous tissue which pulls down the structural bed of the nails making them appear as if they were floating. Further structural changes take place starting from the smaller bones of the hand or foot as the case may be and ultimately involving the longer bones of the limb, which gives the complete picture of osteo-arthropathy. It has also been noted that however gross the clubbing or the osteo-arthropathy may be, quick retro-gression takes place once the offending factor, the tumour or any other obstruction is remedied. It may not be out of place

to say that changes have been described within twenty-four hours after removal of a diseased lung.

Coming back to the case under discussion, it is presumed that the luetic pathology as shown by his positive serology is coincidental and the causative factor must have been some change in the vascular tree supplying the upper limb. The extensive manipulation that was made to do the brachial catheterisation wherein later it was found that the brachial artery terminated in a narrow vessel from the middle of the upper arm downwards, would appear to have created a stimulus for the establishment of an effective collateral circulation with the resulting improvement of the individual. The exact nature of the pathology in this patient is anybody's guess.

THE FIFTH MADRAS STATE OPHTHALMIC CONFERENCE (1957)

NOTICE

The above Conference will be held on the 14th and 15th September, 1957 at Courtallam, a salubrious place with good waterfalls, in Tirunelveli District of our State. Dr. Homi D. DASTOOR, F.C.P.S., D.O. (Oxon), D.O.M.S. (Lond.), Professor of Ophthalmology, Grant Medical College, Bombay has kindly consented to preside over the Conference.

Any Eye Surgeon who has not received so far the INTIMATION CARD is requested to kindly intimate the Convener of his address *immediately*, along with a glaze-finished *passport size photograph of his* to be included in the Souvenir.

Those willing to read Scientific papers during the Conference or contribute articles for the Souvenir are requested to send them before the end of July, 1957.

Narayan Eye Hospital, }
Tirunelveli. }

N. C. SEKHAR,

Convener.

ASSOCIATION NEWS

COIMBATORE BRANCH

A meeting of the Association was held on Friday the 31st May 1957 in the Association premises.

Dr. T.V. Sivanandam, M.B., B.S., M.L.C., President presided.

Nominations for the office of the President & Vice-Presidents for the Madras State Branch were held.

Dr. Miss. S. Padmavathy, M.R.C.P. (Lond.), M.B.C.P. (Edin.), Professor of Medicine, Lady Hardinge Medical College, Delhi, gave a lecture on "Some observations on types of Heart Diseases in India and their prevention and treatment" with illustrative charts.

CHINGLEPUT BRANCH

The monthly Meeting of the branch was held on Sunday the 21st July, 1957 at the Municipal Council Hall, Chingleput. Dr. M. Santhosham M.B., B.S., F.C.C.P., delivered a lecture on "Relapses in treatment of Tuberculosis."

Election of office bearers for the centre was held.

MADURA BRANCH

The Monthly meeting of the Association was held under the Presidentship of Dr. K. Balakrishnan, M.B., B.S., T.D.D., A condolence resolution on the demise of Dr. M. Kalyanasundaram, L.M.P., and Dr. R. S. Krishnan, L.M.P. was passed. There was a symposium on Head-Ache. Dr. G. Venkataswamy, M.S., Dr. M. D. Ananthachari, M.D., and Dr. S. Kameswaran, M.B., B.S., D.L.O., took part. The eye surgeon observed that in Madurai the incidence of Intraconial Tumour very common and post Influenzal Head-ache are becoming more common.

MADRAS CITY BRANCH

A meeting of the Association was held on Wednesday the 26th June, 1957 at the Madras Medical College.

Dr. A. T. John, B. Sc., M. D., Pediatrics Specialist, Government Stanley Hospital, delivered a lecture on "Kwashiorkar Syndrome." A Film Show on "Kwashiorkar Syndrome" by M/s. Lilly & Co., followed by a Special General Body Meeting of the Association was also held.

Nomination of President and two Vice-Presidents to the State Branch was also held.

RAMNAD BRANCH

A meeting of the Association was held on 12th May 1957 in K. V. Sala Higher Elementary School, Virudhunagar. Dr. Venkatachary presided. Dr. Sylvester, M.B., B.S., D. M. O., Ramnad, spoke about "Acute Abdominal Catastrophies."

TIRUNELVELI BRANCH

The monthly meeting of the Association was held on the 23rd February 1957 in the office of the District Medical Officer, Palayamkottai.

Dr. (Mrs.) C. A. Joseph delivered a lecture on "Placenta Praevia."

TIRUCHY BRANCH

A monthly meeting of the Association was held on Saturday the 22nd June, 1957 in the premises of the Medical Association Buildings, Salai Road, Woriur, Tiruchy. Dr. K. G. Menon, M.B., B.S., the President presided.

A condolence resolution was moved by the Chair and passed unanimously on the sudden and tragic demise of Dr. T. S. Shetty, M.D., Madras, all members standing in silence for 2 minutes.

Then the nominations for the office of the President and two Vice-Presidents for the Madras State Branch of I. M. A. for the year 1957—1958 were held.

Dr. A. Ananthanarayana Iyer, B. A., M.B., B.S., M.Sc., F.A.Sc., Director, Upgraded Anatomy Department, Stanley Medical College, Madras, delivered an excellent lecture on "The Role of the Dead Sperm."

ABSTRACTS

FROZEN SHOULDER

Checkrein shoulder is distinguished from other types of "Frozen Shoulder" by a history in a middle aged person, of disuse that may or may not have followed an initiating event, by slow return of joint mobility limited to the lower ranges with a painful check to the upper ranges of motion, by resistance to ordinary treatment, by findings of limited passive abduction and rotation, by X-ray findings of demineralisation from disuse with calcification deposits in 20%, and by a palpable and audible release of resistance during manipulation under an anaesthetic.

THE CAUSE of the syndrome is not clear.

The pathology of the condition seems to be a contracted adherant capsule, principally in the anterior and inferior elements, including the sub-scapularis. There is no evidence of any inflammatory reaction in the tissues.

TREATMENT of the condition: The patients were hospitalised and a search for contraindications to Corticotropin, such as psychoses, peptic ulcer, tuberculosis and syphilis, bleeding tendencies, congestive heart failure, or hypertension was made. If none is found 300 mgs. of oral cortisone in divided doses daily was given for 2 days. Then the patient was anaesthetised with pentothal and manipulation carried out. It must be done very carefully lest fractures result. After manipulation the anterior inferior portion of the capsule is aspirated for any blood, and if positive 15 to 20 ccs. of a 2% procaine with 500 units of hyaluronidase and 75 mgs. of hydrocortisone is injected. If no blood is found the same mixture is injected into the joint. Oral cortisone

can be tapered during the next 48 hours. If blood is found 300 mgs. of oral cortisone for 3 days and then tapering doses for the next 3 days giving the minimum required to suppress pain is administered. Active motion is started as soon as the patient recovers from the anaesthetic. Heat in the form of wet packs, and exercises for each night and morning for 15 minutes are prescribed.

THOMAS QUIGLEY M. D. (Boston),
*The Journal of the
American Medical Association,*
Vol. 161, Number 9, Page 850—854.

SHOES

A "Proper shoe" depends on what the wearer intends to use it for. There are proper shoes for dress, dancing, bed room wear, athletics military duty, house work, industrial work and so on. A "corrective" shoe is only a sturdy shoe with a rigid shank to accommodate corrective devices and balance the foot. For general wear the leather Oxford is excellent. It should have a full unwrinkled lining of duck. The blisters and pressure areas often seen on the toes of young children may be due to wrinkled shoe linings as well as to short shoes. The shoes should lock the foot at heel waist and instep so that the foot will not slip forward.

The proper length for a shoe suggests $\frac{3}{4}$ inch between the end of the big toe and the tip of the shoe when the wearer stands. This brings the great toe joint to the seat of the shoe (Where the broad toe meets the narrow shank). As for width the shoe should fit the ball of the foot (Metatarsal area) snugly and comfortably without undue looseness across the throat of the shoe or at the sides of

the first and fifth metatarsal heads; nor should the foot extend over the sole of the shoe.

RECHTMAN ET AL,

Medical Clinics of N. America.,

Vol. 40, No. 5, Page 1418, Sep. 1956.

ASTHMA

Asthma is the result of inflammatory disease of the bronchi. When seen through a bronchoscope one sees a red inflamed Swollen mucous membrane covered with secretion. The lumen is narrowed with also an evidence of bronchospasm. Narrowed lumens contain mucous both amorphous and in plugs.

From the AETIOLOGICAL point of view asthma is allergic, intrinsic, or neurogenic or as often occurs a combination of all. Diagnosis starts with a careful history particularly in eliciting a sensitivity to inhalents foods, drugs; attacks of common colds, sinusitis, bronchitis pnehmonitis are to be ascertained. Environmental conditions are also to be ascertained.

One of the commonest non-specific irritants is smoke (not only tobacco smoke and industrial smoke but also therapeutic smoke). Another common group of causes for asthma is respiratory infections. Hard coughing is always followed by bronchospasm and wheezing. Patients frequently over cough to raise mucous. The more they cough the more they wheeze.

Complications and Recurrence.

Bronchitis is likely to be present and to be productive of purulent sputum. Sinusitis chills haemoptysis can also be detected. To ignore complications or to fail to recognise them needlessly prolongs the disease, contributes to its chronicity, and sometimes allows irreversible disease to develop. The cause of a recurrence is a respiratory irritant and is likely to be a neglected cold,

Treatment.

Prophylaxis:—Avoidance of the causes of inflammation of the lower respiratory tract. The first little cough must be treated with respect. The patient should be told that mucous is normal; it protects the mucous membrane from irritants; and that the more he coughs more mucous will be secreted. Normally any excess of secretions is slowly raised by the cilia and other mechanisms in the bronchi to reach to almost to the top of the trachea. At this point the mucous excites a tickling sensation which is a signal for the patient to clear his throat gently when the whole mass will be thrown out. To keep secretions thin, he must drink plenty of water; Iodides and ammonium chloride will not act when the patient is dehydrated. Respiratory infection can be effectively prevented by avoiding persons who have a cold.

Smoke. No smoke is completely benign. The asthmatic gets nowhere while he persists in the tobacco smoke, or those of asthma powders and cigarettes. Medicated smokes relieve spasm and at the same time starts a Smoke bronchitis.

Active treatment of the disease.

In discussing treatment with the patient it is good to impress that a cure could not be predicted; only symptoms can be relieved. In a commencing respiratory infection the patient must be put to bed immediately; as he is likely to belittle the affair. Anti-biotics, Anti-histaminics vaccines and vitamins are unreliable.

Stop smoking. It is difficult but must be accomplished. Mark Twain once remarked that it is the easiest thing to stop smoking, and that he had done it a hundred times.

In an emergency the patient must be taught to inject himself 3 or 4 minims of Adrenalin 1 in 1000 to be repeated in

20 to 30 minutes if it has not stopped by that time. Taken at the earliest time, it will usually stop the attack. Or he may be advised to have an inhalation of Adrenalin 1 in 100. Adrenalin is a normal product of the body and is not a noxious habit producing drug; and this information will help patient to get rid of the fear of adrenalin; and make it easy for him to have self administration. The new hormones may bring a severe asthma under control temporarily. The prolonged use of corticotripin etc. may give rise to undesirable metabolic defects and is to be avoided as far as possible.

Sinusitis and obstructive pneumonitis are to be attended to. When emphysema complicates asthma complete recovery is impossible. Asthmatic bronchitis with its cough aggravates emphysema. With coughing and bronchospasm banished, emphysema should not increase.

Louis Prikman M. D. ROCHESTER (Min),

Journal of the

American Medical Association,

Vol. 161, No. 10, Page 937 to 940,

July 7; 1956.

HYPOGLYCAEMIC SULPHONOMIDES

B. Z. 55 and D. 860.

These sulphonomides lower the blood sugar values in the stable middle aged diabetic. The action of these differ from insulin and these do not unnecessarily correct the other metabolic defects found in diabetes mellitus. British and American literature are of opinion that B. Z. 55 is dangerous substance unsuitable for long term control of diabetes. D 860 may prove safer; but long term trials are necessary. Till the following three questions are answered satisfactorily;

these compounds must be regarded as experimental, and must be used under the strictest supervision.

1. Do they produce dangerous side effects? B. Z. 55 has been reported to have produced dangerous agranulocytosis; while D. 860 is claimed to be free from this effect.

2. What is their mode of action?

3. Though they influence blood sugar values do they prevent the other metabolic defects like neuropathy and retinitis?

It will take a long time to answer these questions, and till then these compounds must be used under strict clinical control.

Leading article B. M. J.

August 1956. Page 465.

CORTISONE IN ASTHMA. (Report to the Medical research council by sub committee on clinical trials in Asthma.)

The asthma sub committee was appointed specifically to investigate the value of Cortisone in patients with asthma. Patients with chronic asthma received either cortisone or placebo tablets. The general conclusion to be drawn from these trials is that the patient receiving cortisone were subjectively and objectively improved during the first two months of treatment to a greater extent than those receiving the placebo, both groups simultaneously receiving anti spasmodics. The early improvement with cortisone treatment was hardly sufficient to make a significant contribution to improved capacity for work, and cannot by any standard be regarded as dramatic or as great as that shown in patients with status asthmaticus. This early improvement was not maintained, and by the end of the trial the cortisone treated group showed no significant advantage over the placebo group.

It is known that the treatment of status asthmaticus with antispasmodic drugs is successful in a high proportion of patient. and it seemed advisable to compare, with proper precautions, the effectiveness of cortisone with that of anti-spasmodic drugs. The asthma sub-committee reports about the trials with anti-spasmodic like adrenalin 1 in 1000 by needle, 2. aminophyllin intravenous, 3. Isoprenalin 1% inhaled, 4. oxygen and 5. antibiotics and sedatives; and then switched on to cortisone in intractable cases. The committee summarise their findings as follows :

A comparison is made between the results of treating patients in status asthmaticus with anti-spasmodic drugs alone and with cortisone in addition to antispasmodic drugs.

All patients were first treated with anti spasmodics for the first 24 hours and only those who were still in status asthmaticus were admitted to the trial.

32 patients in 12 hospitals were admitted to the trial of whom 15 were in the cortisone group and 17 in the control group.

The patients in the control group were without doubt more effectively treated than others. By the 4th day 10 of the 15 treated with cortisone no longer had disabling bronchial obstruction, whereas only 4 of the 17 in the control group were as well as this. At the end of the 14 day period 11 out of the 15 in the cortisone group, but only 4 out of the 17 in the control group, were free from bronchial obstruction.

Observation of the patients for three months after the trial showed that those in both groups reverted to their usual asthmatic condition; and attacks of status asthmaticus recurred in 9 out of 11 patients in the cortisone group, and 7 out of 14 in the control group.

In an editorial in the same issue of the *Lancet* we find that :—

‘The experience has shown that cortisone has a place in the treatment of asthma, especially in the control of the occasional acute seasonal episodes in patients who are resistant to other forms of therapy and in patients with severe status asthmaticus. It has also a place in the treatment of the small group of patients whom we have mentioned as developing intrinsic asthma in later life. The amount of cortisone to be given in cases of chronic asthma has to be found by trial. The routine followed in the M. R. C. investigations was to give 300 m. gs. of cortisone on the first day, 200 on the second, and 100 on the succeeding 4 days after which the maintenance dose was adjusted at an effective level, and thereafter the dose was decreased by 25 mgs. a day until withdrawal was complete. It is worth emphasising however, that cortisone has no place in the routine treatment of every case. A remainder that the prolonged administration of this powerful drug may be attended by harmful side effects should be unnecessary.

LANCET,

Oct. 20, 1956.