made to confine the preparation to the lesion itself. The suspension must remain in contact with the warts for at least six to eight hours, and clothing must be prevented from absorbing it or rubbing it off. Hard crusts remaining from previous treatment must first be removed before a further application is made. The crusts can be softened with the podophyllin oil and left to soak in for a few minutes, after which they are easy to detach. After six to eight hours the oil should be washed off with soap and water, and the parts dried carefully, and kept dry with a powder such as pulv. zinci co. If this is not done inflammation may occur. An ordinary orange stick proved useful, the blunt end being used to apply the oil and the sharpened end to remove crusts and open up fissures between multiple warts to assist penetration.

Results

Twenty-five cases consisted of single or multiple condylomata acuminata of the penis or anus. Isolated warts shrivelled up and became yellow within 24 hours and dropped off in a few days, leaving no ulceration or scarring. Profuse growths usually required two or three applications. Treatment is painless. Normal tissue is substantially unaffected, in contrast to the action of the usual caustics. There is, however, a risk of inflammation, especially balanitis; but this may be obviated if precautions are taken as described.

One of these cases needs special mention. The man had been under treatment for penile warts for a year before I saw him. Treatment had consisted of (i) circumcision and cauterizing of warts with the galvano-cautery; (ii) application of a diathermy cautery three times; and (iii) two courses of small doses of x rays six and seven months previously. But after each treatment the warts recurred. On examination there was a most profuse cauliflower growth of warts covering and hiding the end of the penis. The warts were growing from the urinary meatus, glans penis, coronary sulcus, and along the line of the circumcision scar. Secondary infection had occurred, with the production of a profuse purulent offensive discharge. Compresses of flavine were used to combat the infection. Podophyllin in oil was applied to small areas at a time, so that in five weeks some 15 applications had been made. At the end of this period the penis was substantially normal except for scarring from previous treatment. One month later a few warts began to recur, but two applications in a week led to their complete disappearance.

After success in this case with the meatal warts other cases of single meatal warts were treated successfully without apparent ill effect on the mucous membrane of the urethra. In these cases the urine should be held for six to eight hours, so that the podophyllin is not washed away.

Another case is in a different category. It was a profuse eruption of warts of the face, chiefly in the beard area, maximal over the chin. The onset had been 18 months previously. In the interval treatment had been with (a) chemical caustics, (b) curetting, and (c) small doses of x rays. During four weeks 15 applications were made. Single warts dried up and fell off after one application, small bunches of warts responded to two applications, whereas the thickened and deformed skin of the chin required 10 applications.

Commentary

Single soft warts may be removed with success by several methods—e.g., caustics, curetting, ligature, and galvano- and diathermy cauteries. Most of these are painful. Multiple warts are more difficult to cure, and require either special skill or special apparatus. They present particular difficulty to x-ray therapy by reason of their situation and multiplicity, and also, in hairy regions, because of fear of epilation and permanent skin changes.

Podophyllin in oil is easy to obtain, simple in use, and successful in the more awkward kind of case—warts of the urinary meatus, and multiple warts of the penis, vulva, anus, and face.

To obtain success with podophyllin thorough and prolonged application is necessary. The case of warts of the face and two cases of warts of the anus had been treated by a colleague with podophyllin, on my recommendation, without success. Failure is thought to have been due to the podophyllin being

absorbed into dry gauze dressings in the first instance and into underclothing in the second. Complete success was later obtained by ensuring that the oil remained in contact with the warts.

Summary

The results of treatment of warts with podophyllin reported by Culp, Magid, and Kaplin have been confirmed.

The preparation used was podophyllin resin B.P. 25% in liquid paraffin B.P. This is easy to obtain.

The treatment is simple and requires no special skill or apparatus, but the application should be thorough and prolonged.

It is suitable not only for single soft warts but also for more difficult cases, such as warts of the urinary meatus and multiple warts of the penis, vulva, and anus.

In addition multiple warts of the face disappeared under this treatment.

Two cases that had failed to respond to x-ray therapy were treated successfully.

The excellent results justify a wider acquaintance with podophyllin treatment and a trial in cases other than condylomata acuminata.

REFERENCE

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Medical Memoranda

Treatment of Chronic Otitis Media

Recruits are referred to specialists by Army medical boards if they have puzzling ear conditions. Most men have perforated tympanic membranes, the perforation usually being located centrally or antero-inferiorly, and so they are easy to cure. Some have attic perforations and some a polypus, and these are more difficult, yet usually possible, to cure. Most men have had the discharge lasting over many years, and the only treatment they have had has been hydrogen peroxide or glycerin of carbolic drops, no attempt being made to clean the ear before using these. The object of this note is to condemn all treatment that does not first involve dry cleaning of a discharging ear, and to give the family physician an easy method of cure. The treatment I adopt is as follows:

METHOD

I give each man 24 "peerless wood applicators," which can be repeatedly boiled, or, if the meatus is small, a fine metal probe; an ounce packet of long-fibre cotton-wool; freshly prepared boric-iodine powder (Lederman, 1917) and, if the perforation is small, a Fowler auto-insufflator, which acts like a Politzer bag; a powder-blower; and a bottle of liquid paraffin and an eye-dropper. I spend some time teaching each man to lay a thin transparent plaque of cotton-wool 3 in. long on the first and second fingers of the left hand, to lay the stick or probe on the cotton, and then to place his thumb, touching the first and second finger-tips, over the stick, so that the two fingers and thumb encircle two inches of the cotton and stick; and, finally, grasping the proximal inch of cotton with his right fingers and thumb, to rotate the cotton and stick, not moving his left fingers. The method of preparing boric-iodine powder is described by Carruthers (1943), while the method of preparing the cotton-covered stick is illustrated in five pictures in the same book.

I then teach the man how to straighten the external auditory meatus. If the right ear is affected I tell him to put his left hand over (not behind) his head and grasp the tip of the right ear with the first finger and thumb of the left hand, and pull the ear upwards, keeping the ear in contact with the skull, and then slightly backwards. The man is then told to rest his right hand on his cheek, and, holding the cotton-covered stick with his fingers, to worm it gently two inches into the ear, and repeat this cleansing process until the cotton returns clean or covered with blood. If the perforation is small the patient then uses Fowler's auto-insufflator—which blows the pus out of the middle ear—and repeats the cleaning process. He next takes up a powder-spoonful of boric-iodine powder, and, still keeping the meatus straight, blows the powder into the ear.

The above treatment is carried out three times a day. The patient is instructed never to let water enter the ear, and so before he immerses his head under water he fills the ear with liquid paraffin and plugs it with cotton-wool. He is also told never to turn his ear into an incubating-tube by wearing cotton-wool in it. This treatment usually cures a chronic otitis media in two or three weeks.

As an alternative treatment one can fill the ear with a suspension of sulphanilamide (1 g. to 30 c.cm.). This method is especially good with young children who will not tolerate the ear being cleaned, as they can lie on the bad ear for 15 minutes to empty it, and have this treatment done, after which cotton-wool can be applied.

Banham (1944) has recently published two prescriptions as an alternative to boric-iodine powder; one contains sulpha-pyridine as well as boric-iodine powder, while the other has

equal parts of sulphathiazole and boric acid powder. Hollender (1943) recommends sulphanilamide, provided it be mixed with boric acid powder, for if used alone it forms an obstructing cork. The choice between sulphanilamide and sulphathiazole depends on the bacteriological nature of the discharge—sulphathiazole being used in the presence of a staphylococcal or pneumococcal infection, and sulphanilamide in the presence of a streptococcal infection.

The first and second treatments described have allowed many recruits to pass into the Forces.

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A Case of Gunshot Wound of the Abdomen

The case described below is remarkable for the length of bowel resected at operation, and also raises the question of the dosage of morphine that should be used for the severely injured.

CASE NOTES

An Indian sepoy aged 24 was brought to a mobile surgical unit 18 hours after he had received a rifle-shot in the abdomen. On examination he was found to have a ragged wound in the right iliac fossa through which a large mass of intestines was protruding. This had been covered with a shell dressing. He was accompanied by a medical officer, who said that when brought to him some two or three hours previously the patient was so distressed that it was decided to give him a large dose of morphine. As it was impossible to have a light at the time, the medical officer was uncertain how much morphine he was giving, but he believed it was from 1/2 to 1 gr. No attempt had been made to resuscitate the man with plasma. His condition when seen by us was very poor. His breathing was slow and shallow and his pulse rapid and feeble. He was fairly alert mentally, and did not appear to be very uncomfortable. He was given atropine 1/50 gr. hypodermically and was taken to the theatre for operation without delay. Anaesthesia was induced with ethyl chloride, followed by ether on an open mask (Ogston's). Carbon dioxide had to be used for adequate breathing, and nikethamide (coramine) was injected hypodermically and intravenously (1.7 c.cm. each). An intratracheal tube was passed under direct vision and oxygen was given throughout.

The wound was enlarged and practically the whole of the ileum was found to be prolapsed. It was also perforated in a number of places and was gangrenous. Twelve and a half feet of the small intestine from the ileo-caecal valve upwards was rapidly resected, and the proximal end was inserted into the transverse colon, the distal end being invaginated into the caecum. Sulphanilamide powder was introduced into the peritoneum and the wound was closed, with a drain into the recto-vesical pouch. During the operation one pint of plasma was given by drip.

Convalescence was complicated only by sepsis in the wound. The general condition of the patient was remarkably good throughout, and he spent the first few days wondering why he was not getting his bowels open and why he was denied his rice and vegetables. A continuous intravenous drip saline was maintained for four days with sulphapyridine in each bottle, and an unsuccessful attempt was made to keep a Ryle tube in place. The patient was evacuated in very good condition on the seventeenth day.

COMMENTARY

This case brings out a point which has been learned by experience—namely, that in abdominal wounds more than six hours old it is undesirable to postpone operation for the sake of resuscitative measures however grave the patient's condition may be. In this case plasma was given as early as possible, but the operation was not delayed in the hope of an improvement in the general condition.

Although a large dose of morphine is by no means ideal in such cases from the anaesthetist's point of view, it might well be argued that this patient would not have survived to reach the surgical team had not a large dose of morphine been given. In view of the variety of ways in which individuals react to morphine it is not suggested that the use of a massive dose, as in this case, should be indulged in as a routine, but it is perhaps reasonable to speculate that this was one of those fortunate people who apparently react wholly favourably to morphine, and that it enabled him to survive this extremely severe injury and operation.

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Reviews

YEARBOOK OF UROLOGY

The 1944 Year Book of Urology. By Oswald S. Lowsley, M.D., F.A.C.S. (Pp. 416; illustrated. 18s. 6d.) Chicago: The Year Book Publishers; London: H. K. Lewis and Co.

Although urological research has been severely restricted by the war, the *1944 Year Book of Urology* does not appear to have suffered. It is as full of interesting material as its predecessors. Perhaps the only reminders in its pages that the world is at war are the absence of any reports or papers from clinics in occupied Europe, and the appearance of a special article on the use of penicillin in the treatment of urogenital infections. This article, by Capt. L. R. Reynolds and Lieut.-Cmdr. Weyrauch, is based on observations made on a very large series of cases examined in various hospitals of the U.S. Navy. It is particularly worthy of attention. There can be no doubt that penicillin is of inestimable value in the treatment of gonorrhoea, especially in those complicated cases in which the sulphonamides have proved successful. A course of 100,000 units of penicillin will bring about a cure in well over 95% of all patients with uncomplicated gonococcal urethritis if the drug is given in ten doses of 10,000 units every three hours. In the treatment of non-gonococcal infections the effect of penicillin is unfortunately much less impressive.

The *Year Book* also contains interesting articles on the surgery of the kidney and the adrenals. Dr. S. F. Wilhelm of New York has planned a new technique for operations on cases of obstruction at the pelvi-ureteric junction. Instead of implanting the divided ureter into the pelvis he splits the end of the ureter and implants the pelvis into it, thus avoiding the possibility of forming an obstructive flap. Drs. E. S. Judd and F. Z. Havens of the Mayo Clinic contribute a useful article on the treatment of the traumatic avulsion of the skin of the penis and the scrotum. They describe the use of both grafts and plastic operations. Dr. L. E. Sutton of Syracuse University gives an account of a case treated by first carrying out a perineal urethrotomy and then burying the denuded penis under the skin of the abdominal wall. All these articles are beautifully illustrated, and the *1944 Year Book of Urology* maintains the high standard of its predecessors.

PHYSICAL MEDICINE

Physical Medicine in General Practice. By William Bierman, M.D. (Pp. 654; illustrated. 37s.) New York: Paul B. Hoeber, Inc.; London: Hamish Hamilton.

Before reviewing any book it is customary for the reviewer to read the preface with some care, so that the intentions of the author and the scope of the work may be gathered. On this occasion it was decided to go through the book and then, as it were, write a preface for it, as found by personal study. On doing so, three outstanding impressions were left: first, that here was a book that gave an accurate, comprehensive, and yet fairly judicial conspectus of the possibilities of physical medicine for general practitioners who wished to be well informed on the subject; secondly, there jumped to the mind the old Chinese proverb that "A picture is worth a thousand words," because the numerous line illustrations throughout the book seemed to clarify some point of technique or help the practitioner to visualize some special position of patient or apparatus; and, thirdly, that those techniques which need considerable "filling out" have suitable references at the end of each chapter. It was interesting to find, on reading the preface, that all these three points were particularly emphasized by the author.

Though the book keeps closely to its original aim of being informative for general practitioners, there are here and there useful practical hints on technique that can with advantage be absorbed by the physical medicine specialist or the physiotherapist. Considering the size of the volume there are extremely few techniques or statements that are not consistent with the best British practice in this field. The technique illustrated on page 156 (Fig. 91) is not one that would be considered free from risk of burn in England, while that in Fig. 92 would be considered a safe and useful method. It is also rather