nervous supply of the eye, probably by direct degenerative action on the central nerve elements, and as a result the following may ensue: First, atrophic changes in the cornea producing a typical keratitis. Secondly, degenerative changes in the tissues of the optic nerve producing a true malarial neuro-retinitis. Thirdly, paresis of the extrinsic muscles of the eye. Fourthly, affections of the sensory nerves of supply.

This, I think, represents a fairly accurate and reasonable view of what really occurs. All the other many affections of the eye structures which have been described as being malarial are not truly so, but are probably simply inter-current affections or complications.

A practical conclusion is that in military operations in tropical countries in all cases of chronic eye trouble latent errors of refraction should be looked for. Their correction will in many cases cure or alleviate greatly the condition even though the error may be a small one.

AN OPERATION FOR RECONSTRUCTION OF THE URETHRA IN CASES OF SEVERE OR IMPERMEABLE STRICTURE.

BY

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THE following cases illustrate a method of procedure for reconstruction of the urethra in severe or impermeable stricture which will prove, in my opinion, more reliable and easier to perform than any other yet commonly practised.

A patient, aged 43, admitted to Christchurch Hospital in March, 1917, under my care had complete retention of urine, and the doctor who sent him had failed to pass any instrument. It was found that no instrument could be passed owing to a tough stricture in the bulbous portion of the urethra. The site of this stricture corresponded with a scar in the perineum, where an abscess had been opened some years previously. He stated that he had frequently to pass a catheter himself, that numerous doctors had dilated his strictures at intervals during the past eight years, and that the process had been more frequent and difficult of late. He had a high temperature and rapid pulse on admission, and looked pale and ill. Rigors also occurred.

Paracentesis suprapubically failed to relieve him except for a trickle. It was judged that the failure was due to the bladder being full of blood clot. Suprapubic cystotomy was performed without loss of time, and a very large quantity of foul-smelling blood clot and urine escaped. The bladder was washed out and drained. He recovered rapidly, and in a few weeks had put on flesh, but no instrument could be passed through the urethra. I decided to attempt some method of restoration of the urethra.

In Murphy's *Clinics* (December, 1916, vol. v, No. 6, p. 1189) Dr. Hochrein of Chicago described an original operation, performed for the first time in October, 1914, for the cure of an impassable stricture of the penile portion of the urethra by the use of a pedicled attached flap of dartos. I decided to adopt this method with necessary modifications.

Operation.

With the patient in the lithotomy position, a Wheelhouse's sound was passed as far as the stricture and an incision of ample length made in the middle line of the perineum down to and through the urethra on to the end of the instrument. With some difficulty a fine probe was passed through the stricture into the bladder. This was left in whilst the dense fibrous tissue was divided, laying open the "floor" or ventral wall of the urethra. I continued this incision until I was able easily to pass my finger into the bladder alongside the probe. I now dissected away all scar tissue, being careful only to preserve a strip of the "roof" of the urethra, representing, perhaps, one-third of the circumference. This appeared quite normal and was essential for the further steps of the operation. A broad flap of dartos was now cut in such a way as to leave the base attached in the vicinity of the point of the urethra which was first opened—that is, the most distal portion of the stricture. This flap would be $2\frac{1}{2}$ in. long and $1\frac{1}{2}$ in. broad, its rounded free end pointing towards the meatus. When dissected back, it reached easily to the limit of the dissection, which had been carried towards the bladder, as previously described. A rectal tube, the size of the middle finger, was now passed

through the meatus and brought out in the wound. This was re-entered and passed easily along the proximal urethra into the bladder. The flap was brought back over this, and, by slightly displacing the rubber tube, the left side of the flap was secured by numerous plain catgut interrupted stitches to the corresponding edge of the strip of urethral roof which had been left as described. This was repeated on the other side, and the end of the flap was finally stitched accurately to the divided circumferential edge of the proximal urethra. The gap in the dartos was closed with a few catgut stitches and the incision closed. The tube was secured to the retracted foreskin by a stitch behind the corona. It was my intention to leave the tube in for three weeks, but the patient sneezed it out at the end of a week. It was cleaned and sterilized, and I was somewhat surprised to find that it went in again with ease. Three weeks after the operation it was removed, and the patient has passed urine with perfect ease since (eleven months ago). I was able to pass a 14 to 17 Lister's bougie with ease six months after the operation. About seven months after the operation the patient had a typical attack of renal colic, and about a week later he informed me he had passed a round smooth brownish stone as large as a pea.

I have since performed similar operations in two other cases.

In the first of these I had the misfortune, in shaping the flap, to divide the superficial perineal artery on the right side. As a natural result the flap sloughed on that side. I managed to close the resulting fistula at a second operation, and when last heard of the wound was quite healed, and he was passing urine normally. In the second of these cases there was a perineal fistula just proximal to a stricture. The patient had for a considerable time been passing all his urine through the fistula, and his life was a misery to him. In this case I took the flap from the left side and turned it across. This seemed easier at the time, and involved much less time in stitching. The operation in this second case was performed under spinal anaesthesia, owing to the patient's age and debilitated condition. All the patients up to the time of writing are quite healed, and passing urine normally.

I have been induced to put these cases on record because I believe the flap operation is easier to perform and a great deal more satisfactory than the grafting operation. There is no doubt in my mind that the urethral epithelium rapidly grows from the strip left in the roof of the urethra, and covers the entire surface of the dartos flap.

THE INFLUENZA EPIDEMIC IN A CAMP.

BY

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MAJOR G. YOUNG, and CAPTAIN J. GRIFFITHS,
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THE widely prevalent influenza epidemic visited this camp recently, 1,439 cases being admitted to hospital between June 21st and July 10th. The admissions on the first day of this period numbered 27, and gradually increased to their maximum on July 1st, on which day 154 cases were admitted. Thereafter the number of admissions gradually decreased.

Most of the cases were of characteristic type—admitted with temperature ranging from 101° to 104° , complaining of headache, backache (lumbar), general aching, and sore throat. The majority stated that they had been suddenly taken ill, with a feeling of great weakness. They looked ill; but apart from the fever, some congestion of the pharynx, and in a few cases slight bronchial catarrh, presented no other symptoms.

The illness ran a short course, the average duration of stay in hospital being five days. Within twenty-four to forty-eight hours of admission the temperature dropped by crisis to normal, or hovered between 99° and 100° for a few days. During the period of elevation of temperature the patients slept most of the time, and did not care to be disturbed, even for food. As soon as the temperature dropped they sat up in bed looking and feeling well, and began taking their food well.

Complications were few. Several patients had obstinate constipation; one or two had mild diarrhoea. Cough in a few cases was troublesome. Sixteen of the 1,439 cases

developed more or less typical lobar pneumonia; of these seven died. So that, although the incidence of pneumonia was low, the case death-rate for pneumonia was high.

Preventive Measures.

As soon as the epidemic declared itself measures to prevent its spread were adopted.

All cases, when they reported sick with a temperature of 99° or over, were immediately sent to hospital. The whole of the contacts of three units were passed through the Levick spraying chamber. No reduction occurred in the number of admissions from these units, there being a greater incidence after than before the use of this method. In other units gargling with permanganate solution (1 in 5,000) was tried, but no effect was noticed.

In one unit spraying the nose and throat with acroflavine solution (1 in 1,000) seemed to have a distinct preventive effect. In many huts where it was used after the occurrence of two or three cases no further cases developed. The results here would seem to warrant further trial of this method.

Bacteriology.

The bacteriological investigations comprised the examination of: (1) Smears and growth from nasopharynx, (2) smears and growth from sputum, (3) blood cultures, and (4) growth from cerebro-spinal fluid.

Forty-three cases were chosen at random and examined on different dates, with the following results. Out of the 43 cases only in 16 was the nasopharynx swabbed.

1. *Nasopharynx*.—(a) *Smears*. Amongst other organisms present there was a predominance of a Gram-positive diplococcus. Pfeiffer's bacillus was absent in all cases.

(b) *Culture*. The same organism—namely, a Gram-positive diplococcus—was obtained, Pfeiffer's bacillus being absent in all.

2. *Sputum*.—(a) *Smears*. Forty-one sputa were examined, in 32 of which Gram-negative bacilli were found, often in clumps, as well as Gram-positive diplococci. In the remaining 9 cases there was an abundance of Gram-positive diplococci.

(b) *Culture*. The media used were agar, trypsin blood agar with rabbit's blood enrichment, and trypsin agar with human blood. The same sputa were used.

(1) *Agar*.—Minute transparent circular colonies about the size of a pin's head were obtained at the end of forty-eight hours. The colony was slightly granular towards its centre. On staining the culture by Gram's method the organisms were seen to be Gram-positive diplococci.

(2) *Trypsin Agar with Rabbit's Blood Enrichment*.—After forty-eight hours two distinctly different colonies were visible. The one was a thin semi-transparent colony about the size of a pin's head, and presented a somewhat granular appearance. On staining by Gram's method the organisms were identical with the Gram-positive diplococci found in smear of sputa and of growth obtained in agar.

The other colony was a minute discrete transparent colony with a smooth rounded edge, with no evidence of stippings on the surface. These organisms did not take up the stain readily by Gram's method, so a modification of Gram's (as regards time) was adopted. The length of time for counter-staining with 1 in 20 carbol-fuchsin was increased to three, five, and ten minutes respectively; the period of ten minutes was found to be the most satisfactory. The organism was a small coccobacillus with rounded ends, slightly larger than that found in smears of sputum, feebly stained towards the centre, and was Gram-negative.

(3) *Trypsin Agar with Human Blood*.—Growth was more luxuriant on this medium than on "trypsin agar with rabbit's blood enrichment," but presented the same cultural appearance. This organism—Gram-negative bacillus—was only feebly stained by basic aniline dyes, and had no action on the sugars. Plates gave the following results:

32 plates showed a mixed culture of Gram-negative bacilli with Gram-positive diplococci.

9 plates showed Gram-positive diplococci and no Gram-negative bacilli.

3. *Blood*.—Nine cases with marked symptoms were chosen for blood cultures. Of these all were sterile.

The two organisms found in the sputum were in every respect identical with the Pfeiffer's bacillus and the pneumococcus.

THE National Medical Institute of Mexico, which was founded in 1890 for research on the flora, fauna, climatology, and geography of Mexico, and for the exploitation of these resources, has by a recent decree been transformed into the Institute of General and Medical Biology. The institute has been engaged in the study and classification and action of native plants.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

LARGE DOSES OF SALICIN IN INFLUENZA.

IN 1891 I published the results of the treatment of 250 cases of the then so-called "Russian" influenza with large doses of salicin. During the continuance of that particular epidemic, and during those which followed in the next five or six years, I treated upwards of 2,000 more cases in exactly the same way—namely, by 20 grains of salicin given every hour—with exactly the same result—namely, that of rapid recovery obtained in an average of one day and a half without any complications, sequelae, or with the loss of a single life. At the commencement of this epidemic of "Spanish" influenza which is now coming to a close, I started treating the cases I had to attend in the same manner, with the result that in every case recovery has taken place within twenty-four hours. The first two or three doses removed all pain and discomfort, while the temperature was materially reduced. Also, as happened in the 1891 and other epidemics of about that date, the result of saturating the system with salicin was to do away with the infectivity of the patient. Twenty-seven years ago I rarely had more than one case at a time in a household, with perhaps the attendant who looked after the patient, who took it before he or she was thoroughly under the influence of the drug, and during this present epidemic I have been looking after 120 young ladies who, being in Government and other employment, live in a large hostel. Among all of these only nine cases have occurred, and each one of these could be traced to infection outside the hostel, in the office in which the sufferer had been working. Not one single case caused it to spread among the other inmates of the house, salicin in every case being administered and pressed at once. It seems to me that by administering these large doses of the drug fearlessly we have a method both of curing the disease rapidly and preventing the spread thereof. It is needless to say that in no single case have I come across the slightest ill effects from the large doses of the drug given.

London, W.

E. B. TURNER, F.R.C.S.

REDUCTION OF DISLOCATION OF HEAD OF HUMERUS.

Kocher's method of reduction causes pain, and in my experience frequently fails. Traction on the arm with the foot in the axilla gives excruciating agony. Reduction under anaesthesia necessitates two surgeons, and, in my opinion, chloroform is not without extra danger.

The following manipulation is probably not original, but I find no account recorded in the ordinary textbooks.

The surgeon requires the assistance of two men. The patient sits in a chair with the sound arm over the back. One assistant sits in a chair on the injured side, both his hands are placed on the axillary border of the scapula (fingers towards the vertebrae), and he is told to press the shoulder blade towards the spine. The other assistant stands on a chair behind the patient, takes hold of the wrist and forearm, and is told to pull the arm up, the tips of the fingers of the injured limb pointing towards the ceiling, the elbow extended, the palm of the hand looking forwards, the biceps parallel with the ear of the patient. The surgeon supports the head of the bone by gentle pressure with his thenar eminence. This procedure is continued until the muscles are felt to relax, usually less than five minutes. The arm is gradually lowered, and, if everything has been done slowly—no sudden movement—the humerus will be found in position when the arm is brought to the side.

I claim for this method the immediate cessation of pain from the moment the manipulation commences. The vertical position corrects the shortening of the muscles by taking away pressure from the nerves of the brachial plexus, the fixation of the scapula rendering such extension complete.

I have had no difficulty by this method in reducing various kinds of dislocation, but the subspinosus variety has not come under my observation.

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