

A METHOD OF OPERATING IN THE AIR-DISTENDED URETHRA.

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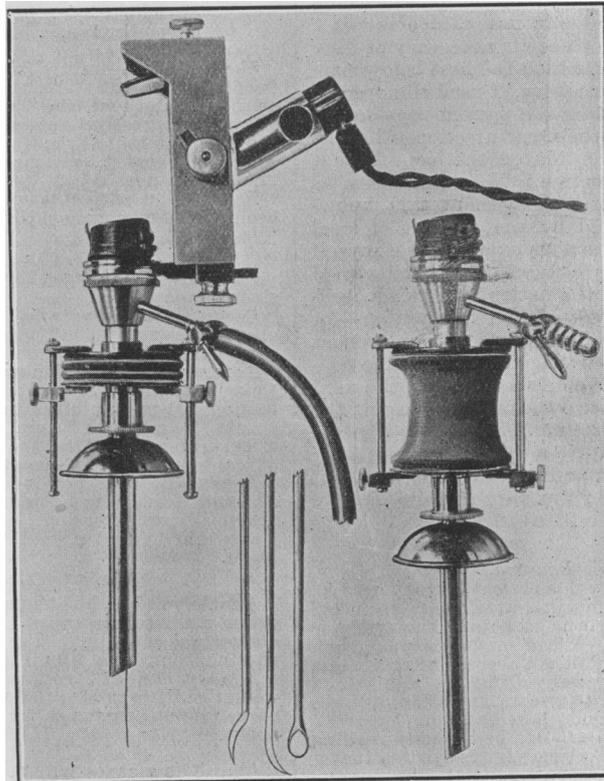
LATE SURGEON TO THE WESTMINSTER GENERAL DISPENSARY.

It has always been a matter of regret to those surgeons who practise Antal's method of aëro-urethroscopy that before any intraurethral instrumentation could be undertaken the glass window of the nosepiece had to be opened to allow the passage of the instrument, thus letting out the air and converting a large field of fixed mucous membrane into a small, lax and mobile one, with which it was never easy to deal. It will be apparent to the urethroscopist that the narrow, elastic, and bulging mucous membrane peculiarly invites the attempt to dilate and fix it before any intraurethral operation is undertaken. In the expanded condition of the urethra the Morgagnian lacunae, dilated gland ducts, sinuses leading to small residual gland abscesses, old false passages, fistulae, tight strictures with eccentric opening, etc., are straightened out and fixed, and their orifices rendered patent by the dragging away and thinning of the mucous membrane due to the outward bulging of the contiguous unaffected parts. Inflamed lacunae, small cysts and superficial gland abscesses are made prominent and affected glands of Littré mapped out in well-marked cases as plainly as the pips on the surface of a strawberry. Superficial strictures of large calibre and bands, the thin tendinous-looking orifice of healthy lacunae and of Cowper's ducts (when large) are rendered taut and white. If under these circumstances instrumentation could be undertaken, a great advance in the treatment of chronic urethral affections would be secured. Hence attempts have been frequently made, but up to now with indifferent success, to devise an apparatus by means of which the application of caustics, etc., could be made to the diseased crypts and canals, and small operations performed on the various lesions while the mucous membrane was fixed in the air-distended condition.

It seems to me that the instrument here described (made for me by Messrs. Down Bros.) fulfils all the necessary requirements, and, moreover, it is quite a simple contrivance. It consists of a tube or cylinder of thin rubber (inner cycle tubing) $1\frac{1}{2}$ inches in length and diameter, and secured at each end to a metal disc, one disc having in its centre a mount to plug into the urethral cannula and the other a mount to receive the nozzle of the urethroscopist. This concertina-like apparatus, which is interposed between the urethroscopist and the cannula, allows all the necessary movements for intraurethral instrumentation while preventing the escape of the air. The movements in the longitudinal direction are quite free, except that when in use, on collapsing the mount to project the intraurethral instrument, the internal air pressure has to be overcome. The other movements are restricted by two side pins which keep the urethroscopist more or less in alignment with the cannula from which it is separated by the pneumatic mount; these pins are fixed into one disc only, and pass freely through holes in the periphery of the disc at the other end. A little play is necessary for the manipulation of the intraurethral instrument. The

pins are placed wide enough apart not to come into contact with the cup-shaped mount found on most cannulae of the Leiter design. Finally, a couple of screws fix the apparatus in the extended position while being placed *in situ* ready for use.

Inside the nozzle of the urethroscopist (an extra nozzle being used for the purpose) is fixed a fine female screw, and into this is screwed the instrument selected for use. The urethroscopist thus forms the handle of the intra-urethral knife, probe or curette. The intraurethral instrument when screwed into position just before use must not project beyond the distal end of the cannula, or the urethra may be injured before inflation. In length they are made to suit the present 3-in. and 5-in. cannulae of the Leiter model, but any length cannula and instrument can be obtained. For practice purposes the beginner should use the short (3-in.) cannula and not smaller than 24 F. Most of the diseased lacunae and glands are usually within the scope of this tube. The mounts should fit perfectly to prevent the escape of air, and the rubber air tube must be securely fixed, for should it suddenly become detached the urethra collapses on to the intraurethral instrument. The air reservoir bag should be large, not over-distended, and the tap left open during the use of the instrument, but it must be closed on each occasion the bag is blown up.



Preliminary Urethroscopy.

The air method is suitable only for the anterior urethra, that is, up to the membranous part where the compressor urethra muscle resists the inward passage of air unless unnecessary pressure be used. It is well, except when required for treatment, not to cocaine more than the anterior 3 in. or 4 in. of the urethra, as anaesthesia facilitates the passage of air into the bladder as it does of fluids (irrigations). When the bulbo-membranous area is inflamed great resistance is offered to the inlet of air by the reflex spasm of the compressor muscle, but when the same area is involved in old stricture formation the air rushes into the bladder with great readiness. No harm results from the presence of air in the bladder, but the patient should be made to urinate,

or he should be warned that the air will be passed at the first urination. Of course in atony of the bladder the method should not be used, or any air must be drawn off by catheter.

The meatus having been cleansed and the largest 5-in. cannula selected which will enter the canal comfortably, after lubricating it should be introduced for 1 in. only, the obturator removed, and the moisture or excess of lubricant mopped out with stylet and cotton and the urethroscopist fixed on.

After switching on the light the urethra is distended with air under control of the eye, so that it can be gently done. If filled suddenly the air may straightway enter the posterior urethra and bladder and startle the patient when passing through the former. An examination is now made from before backwards. This is the great advantage of aëro-urethroscopy, as a most un irritating examination can be made. The cannula need scarcely touch the mucous membrane except at the meatus. Apart from this the mucous membrane with its various lesions is examined before it has been disturbed by the cannula. To appreciate this a case of inflamed lacunae

should be examined, when the minute orifices will be seen filled with discharge, which is very easily removed, and the lacunae flattened out by the passage of the cannula. Small flat warts are pressed against the mucous membrane, and afterwards can be found only with difficulty. Again, in early examinations any discharge is liable to be "milked" into the lacunae and gland ducts whose orifices are directed towards the meatus. Cases may be examined almost immediately after the acute symptoms have subsided by the air method, as no irritation need be caused except just within the meatus, which is of little moment. A word of warning, however, must be uttered with regard to maldirection on pushing in the cannula. If the end of the cannula is directed to the roof of the urethra, a most puzzling swelling is made to appear, especially at the peno-scrotal bend. The urethroscope must be kept well towards the patient's head; the distal end of the cannula will thus be directed along the proper axis of the urethra until the bend of the bulb is reached, when of course it must be depressed to view the closed orifice of the membranous part. The fossa navicularis must be carefully examined on withdrawing the instrument. The region of the meatus may be examined by applying the nozzle of the urethroscope to it and letting in some air. This is useful in a small or strictured meatus. In such a case an incision downwards under cocaine would be required to allow of the passage of a cannula. With the light obtainable nowadays there is no advantage in having a shorter cannula than the stock 3 in. Gross lesions can be easily seen with a tube of this length and of only 16 F calibre (child's size). It is when using these narrow sizes that the inflation method compares with the other to such advantage. For instance, with a No. 16 F cannula before the air is admitted only a tiny dark field of mucous membrane can be seen, but immediately air is admitted a large flat and more anaemic wall of the urethra presents itself, and giving a much better reflex. The appreciation of your "bearings" is of the greatest service, and the end of the cannula can be moved about freely without fear of any injury being done. It is due to this anaemic condition of the membrane that so good a view is obtained. The congested vessels are collected more or less into bundles, with the paler spaces intervening. A condition of congestion is not obliterated, only its features are altered. One of the most constant alterations in the canal in early cases, when recovery is delayed, is a thickening along the roof for 2 in. or 3 in., beginning with or beyond the lacuna magna. It is a perilacunar infiltration, and often their lumen is obviously affected and secretes pus. A case will serve to illustrate the method of using the pneumatic mount.

F. T., aged 40, came to me in May, 1907, with a first gonorrhoea. Anterior irrigations of permanganate of potash failed to bring about the usual rapid recovery, although successful in confining the disease to the penile urethra.

Urethroscopic examination at the end of a month disclosed a few Morgagnian lacunae much swollen and discharging pus. The first was probably the lacuna magna. The furthest two were at 3½ in. and 4 in. respectively. All were in the roof and resembled miniature sausages. They were a quarter to a third of an inch long, lying in the long axis of the urethra, and having their swollen meatus-like orifices at right angles to the surface of the mucous membrane instead of flat and often transversely directed as in the healthy (inflated) canal. Irrigations and massage of the urethra with the palm of the hand (the penis lying on the pubis and abdomen) caused no improvement.

Various injections made no difference. Two per cent. silver nitrate solution applied to the lacunae by means of cotton and stylet only aggravated the condition. Drugs by the mouth had no effect. Kollmann's dilators carefully applied with irrigations—a highly successful form of treatment in most soft infiltrations—failed to bring about a cure. The introduction of a probe into the lacunae through the open cannula was found to be very difficult owing to the swollen condition of their orifices. Gonococci were constantly present in the discharge. The new mount having been received from the makers, it was used in the following way: A lubricated 24 F 3-in. cannula was passed to its full extent, the obturator removed and the moisture mopped out. It is better to work while withdrawing the cannula than the reverse way, as a little traction on the organ is useful. The urethroscope being ready with the probe screwed into the nozzle and lightly tipped with silver nitrate, the pneumatic mount, fixed in the extended position, was firmly plugged into the cannula, the probe introduced, and the urethroscope nozzle fixed into the outer end of the mount and the light switched on. The penis was now gripped behind the glans between the middle and ring fingers of the left hand, the thumb and first finger grasping the

cup mount of the cannula. Air was now let in under control of the eye, the side pins unfixed until quite free, and with firm pressure of the right hand the urethroscope was forced down, and, collapsing the pneumatic mount, projected the probe into the dilated urethra beyond the end of the cannula. It was now a simple matter to direct the caustic-covered probe point into the diseased lacuna. The probe, which is fixed into the floor of the nozzle, crosses the cannula to the roof of the urethra. By this means its base interferes least with the view, while the shaft and point are more easily seen and followed. It is better to have the base of a knife, if cutting on the floor of the urethra, fixed into the right side of the nozzle as a better view of the blade is thus obtained. It should not be in the roof, as this would interfere with the view. Of course the female screw carrying the base of the knife can be brought into any position by slightly unscrewing the nozzle of the urethroscope. If the probe points in a faulty direction from its base the urethroscope would have to be tilted out of alignment and no view of the urethra obtained. The above case, which had lasted six months, was quite cured in three sittings, the most noticeable feature being the remarkable abruptness of the recovery after the last lacuna had been cauterized.

By means of the pneumatic mount most of the minor operations in the urethra can be undertaken. Cysts and enlarged glands of Littré can be easily split and afterwards cauterized. Small abscesses can be opened and sinuses slit up. Strictures of large calibre and bands can be incised in the taut condition. Warts can be nipped and cut off by the curette against the end of the cannula. Possibly the eccentric opening of a tight stricture can be incised and straightened to facilitate the passage of a filiform bougie. The electrolytic probe and the galvanocautery point can also be used, but extra nozzles, to which they are attached, are necessary.

For local anaesthesia I generally use ten or twenty drops of a 2 per cent. cocaine or 5 per cent. B eucaine lactate solution to which two or three drops of 1 in 1,000 adrenalin chloride or hemisine have been added.

SEVENTY-SIXTH ANNUAL MEETING

OF THE

British Medical Association.

Held at Sheffield on July 24th, 25th, 27th, 28th, 29th, 30th, and 31st.

PROCEEDINGS OF SECTIONS.

SECTION OF LARYNGOLOGY, OTOTOLOGY, AND RHINOLOGY.

GEORGE WILKINSON, B.A., B.C. Cantab., F.R.C.S., President.

PRESIDENT'S ADDRESS.

THE PRESIDENT, after welcoming the members of the Section, said: The duty of making any lengthy address is not thrown upon me, but there is one recent political event which concerns the Section so closely as to call for observation. This is the passage of the Act imposing medical examination on all school children. For this great social reform the Section, through its members, can claim some credit. The proportion of defective to normal hearing children varies from 11 to 52 per cent. The difference in these figures draws attention to the want of a recognized standard of imperfect hearing, and to a want of uniformity in the tests of hearing applied by the various observers. The working of the new Act will doubtless produce a vast mass of statistics as to the prevalence of deafness, of ear disease, of adenoids, and other aural and naso-pharyngeal defects amongst school children. Such statistics drawn from so wide a field should be of the greatest value; but, in order that their full value may be brought out, there should be uniformity in the method of examination and the standards employed, and I think that it is a matter of urgency that steps should be taken forthwith to fix such methods and standards. A satisfactory feature is that a large proportion of these cases are capable of being cured or benefited by our treatment, for, as far as