Clinical Lecture ON LITHOTOMY.

By EBEN. WATSON, A.M., M.D.,

PROFESSOR OF PHYSIOLOGY IN ANDERSON'S UNIVERSITY, AND SURGEON AND
CLINICAL LECTURER ON SURGERY TO THE ROYAL INFIRMARY,
GLASGOW.

GENTLEMEN,—During the last few weeks I have, in your presence, twice performed lithotomy after the method proposed by Dr. Andrew Buchanan, of this city, and therefore it forms the most natural subject for our consideration this morning. I wish especially to direct your attention to this operation because it is very slightly, if at all, noticed in text-books on surgery, and, in my opinion, it is not by any means sufficiently valued by the profession. I believe, indeed, it is easier, both for surgeon and patient, than any other method of extracting stone from the bladder, and that its results will compare favourably with those of any other operation of the kind. The two cases which are the occasion of this lecture ended, as you know, quite successfully, though in one of them the man was fifty years old. They make up the number of times I have performed this operation to forty-seven, and of these only two have died, or 1 in $23\frac{1}{2}$; and I may briefly state here that in neither of the two cases in which the patient died could it be said that death was the direct result of the operation. In one it was caused by pyæmia; and, on inspection of the body, I discovered an abscess at the fundus of the bladder, which I thought of older date than the operation. In the other case erysipelas attacked the neighbourhood of the wound, and extensive suppuration and sloughing in the pelvis ensued before death. This patient was about fifty years of age; the former was a child. But even if we count both as deaths from lithotomy, the result is still favourable, even when compared with the apparently less formidable operation of lithotrity. Thus, if we look at the somewhat contradictory statistics of the latter operation, we find that, while Civiale states that he only lost 1 in 42 cases, Maligne and other Parisian hospital surgeons give their mortality at 1 in 4 to 1 in 8; Sir Benjamin Brodie lost 9 in 113 cases, or about 1 in $12\frac{1}{2}$; Crichton, 1 in 5; Sir Henry Thompson, 1 in $14\frac{1}{2}$; while the mortality in my cases of lithotomy has been only 1 in $23\frac{1}{2}$.

Then if the ease of the patient after lithotomy be compared with the anxiety which he must endure after lithotrity and during its frequent repetitions, as well as his distress from the fragments sticking in the urethra and often causing retention of urine, one cannot but regard the cutting operation with greater favour than the one by crushing. When the patient is under chloroform during the performance of lithotomy his sufferings are in the great majority of cases ended by the operation almost as completely as the pain of toothache is terminated by a skilful extraction; and I have known a patient after lithotomy sleep for several days and nights with but short intermissions, just from his entire freedom from an agony which had disturbed his rest for months before. Yet I confess that this preference which I have for lithotomy in the majority of cases is founded on my conviction of the safety of Dr. Andrew Buchanan's operation when rightly performed, and I shall therefore mention to you somewhat minutely the steps of that operation, with some of the lessons regarding them which experience has taught me.

The patient having been laid on a convenient operating table and brought under the influence of chloroform, the rectangular staff should be introduced into the bladder and the stone felt with it. The staff to be selected for use in any case is the largest that can be readily introduced into the urethra. It is of consequence that the rectangular part of the staff should be quite passed into the bladder, and the handle brought down between the patient's thighs, to be held there for the time by an assistant. The limbs are then to be tied up as usual, but I prefer passing the bandages round the thighs to the practice of tying the feet and hands

together, both because under chloroform it is needless to fasten the hands, as the patient cannot move them, and because if they are left free there is no interference with the movements of the chest in respiration.

The operator now sits down before the perineum, and he should take care that the hips are projected over the end of the table, and that the body of the patient is lying quite straight before him. He now places the staff as he wishes it to be held during the operation, and of course on this depend the parts cut and the success of the whole procedure. The index finger of the left hand should be introduced into the rectum and the prostate should be felt, while at the same time the operator should take the handle of the staff in his right hand. He should then raise the long limb of the staff at right angles to the table and to the axis of the patient's body, and should place the angle of the staff just anterior to the prostate gland, and therefore in the membranous part of the urethra. Keeping the long limb of the staff in this position, he should now depress the instrument towards the rectum, until, in fact, the angle is nearly on a level with the junction of the skin and mucous membrane of the anus. One other little manoeuvre is still required—viz., to turn the handle of the staff a little to the right, for by this means the short limb of the staff is inclined to the left side of the perineum. The good of this is, that when the point of the knife enters the groove the operator feels more sensibly the fact of its being there by the opposition which the inclination of the staff occasions to its passage to the bladder. This will be perceived at once on trial. If the staff is held right before one, he hardly feels the sliding of the knife along its groove; but if it be held at a slight angle to him, he feels it all the way as he pushes it along to the stop at the end of the short limb. The staff is now committed to the charge of the assistant, who is to hold it exactly as it is given to him during the whole procedure.

It will be observed that in this position the long limb of the staff is nearly parallel with the triangular ligament, and that its angle is not made to project in the perineum, though this was at first supposed to be necessary. In truth, it is not at all desirable to make it project, because the doing so disturbs the parts and inclines the point of the staff dangerously upon the rectum. It ought also to be remarked that the angle of the staff is fairly below the central point of the perineum, and that, as the incision is altogether below it, the deep perineal fascia and the transverse muscle and artery of the perineum are uninjured in this operation, while they are all divided in the operation of Cheselden. I think this the essential feature of Dr. Andrew Buchanan's operation and the one on which its success depends.

The operator retains the index finger of his left hand in the rectum, and puts the thumb of the same hand on the long limb of the staff a little above its angle, of course having the soft parts between them, and thus he makes sure of where the angle of the staff is, for it must correspond to the angle made by the thumb and finger thus placed. The depth at which it lies is very various in different perineums, but it is seldom very great. I know that it has been stated at two lines, but it is often much more, as in fat children and in tall and corpulent adults. However, it is never so great but that one who is practised in the operation can easily plunge his knife directly into the groove of the staff. To do so one must hold the knife above the hand, and raise it so that its blade shall be parallel with the short limb of the staff. Most of the difficulties which I have known to be encountered at this part of the operation have arisen from the operator holding the knife as if dissecting, with his hand above its handle, and also from his introducing it at an angle to, or not quite parallel with, the short limb of the staff. I insist that the knife must be held above the hand, and boldly raised to a level with the groove along which it is to be passed. It may then be made to pierce the perineum and to enter the groove. There is usually no need of a preliminary incision. A little practice will enable anyone who is accustomed to use the knife to perform this step of the operation at once; but he must be sure that the knife is really in the groove and not above or below it, or, as sometimes happens, across the staff, for then he is almost certain to do serious mischief. When the knife is fairly in the groove the operator feels a degree of resistance to its passage into the bladder, owing to the slanting manner in which, as I have already said, the staff should be held; and this gives him confidence in running it on till

it is arrested by the end of the groove. The knife will then be found to have penetrated through the skin and the anterior layer of the superficial fascia, the upper fibres of the sphincter ani and those of the levator ani, and, passing beneath the triangular ligament, to have entered the membranous portion of the urethra just anterior to the prostate, which gland it has also notched in passing into the bladder.

The surgeon now causes his knife to leave the groove of the staff, and, keeping his right wrist stiff, he draws his blade outwards and downwards to the side of the anus, thus cutting only a few more of the muscular fibres above mentioned, with a few usually small bloodvessels, and enlarging the incision of the prostate. He then places the index finger of the left hand in the wound, and passes it along the staff into the bladder. He will then very often feel and fix the stone with the tip of his finger, and may quite safely desire the staff to be withdrawn. If, however, the subject is bulky, it is better to retain it in the bladder till the scoop or the forceps have been introduced.

In the majority of my operations I have been able to fix the stone at once with my finger, and then I introduce a scoop—which is, you see, somewhat more than usually turned down at the point—over the back of my finger, and carry it round both finger and stone so as to seize the latter as in a forceps. It is thus very easily and neatly extracted; but if the forceps is employed, there is less likelihood of immediately grasping the stone. In fact, it is often strangely difficult to do so; and we are left without any good rules by which we may render this part of the operation at all so precise and certain as the others. If the stone is difficult to find, you should not, however, as is often advised, seek for it with your forceps closed, but rather with them slightly open; for thus both limbs of the instrument act as sounds for its detection. I need hardly say that this part of the proceeding must be performed with great delicacy, lest the bladder be injured, and also that the stone when detected may not be moved by a rough touch of the forceps. Of course such difficulty is most likely to be found when the stone is small and in a large adult bladder; and I may here mention a manoeuvre practised by the late Dr. Lawrie in this hospital in these cases. It is to pass the forceps into the bladder so that the joint will be at the wound in the prostate, and then to open the blades to their full extent horizontally in the bladder. This stretches the bladder on the blades, and very likely causes the small calculus to roll between them into the middle of the viscus. If the forceps, with its blades still extended, be now made to sweep round half the bladder—i. e., till they and the handles are perpendicular instead of being horizontal—and then closed, it will generally be grasped at once. If not, it may be turned round the other half in a similar manner; for it is strange how the bladder will sometimes contract around and retain a small stone in its folds. I have on one occasion in the living subject proved the usefulness and the success of this manipulation, which I have not seen described in books, and I would have you bear it in recollection.

I have now only to say regarding this operation that I never use a tube, but only insert a slip of oiled lint into the wound to prevent its edges from adhering, and making the first passage of the urine difficult and painful. This lint should be withdrawn in three or four hours after the patient has been laid in bed; and if any pain or uneasiness is complained of, an opiate suppository or a laudanum injection may be given with advantage.

A WORTHY EXAMPLE.—The following address, neatly framed, accompanied with a mahogany case containing a complete set of spoons, forks, &c., requisite for the use of the dinner-table, was “Presented to P.G.M. Wright Allen, Esq., by the Amold United Independent Order of Odd Fellows, as a mark of respect and esteem, on his retiring from the office of Honorary Corresponding Secretary, which he ably filled from the commencement of the order, a period of upwards of twenty years. 1872.” This handsome present, of the value of about £20, coming from a class of men consisting of framework-knitters, is a testimonial of great value, showing a depth of gratitude to their medical officer for his additional kindness which is duly appreciated by the recipient, who has for a long period practised in the above-named populous village near Nottingham.

ON THE DIFFERENTIAL DIAGNOSIS AND TREATMENT OF BRONCHOCELE.*

By MORELL MACKENZIE, M.D. LOND.,

PHYSICIAN TO THE HOSPITAL FOR DISEASES OF THE THROAT,
ASSISTANT-PHYSICIAN TO THE LONDON HOSPITAL.

It has recently been remarked, with great truth, by Dr. Parona,† of Bologna, that no advance has been made in the treatment of bronchocele in the last fifty years. Since Coindet discovered the medicinal value of iodine the therapeutics of goitre have, indeed, remained almost stationary, and it might truly be said that the general recognition of the curative powers of iodine in relation to bronchocele has actually retarded the “exploitation” of that important disease.

Whilst, however, iodine exercises such a beneficial influence over some forms of goitre, in others it is quite inoperative; and hence it becomes important to differentiate the varieties of the disease which are met with in practice. For clinical purposes bronchocele may be divided into seven varieties—namely, (1) Simple or Adenoid, (2) Fibrous, (3) Cystic, (4) Fibro-cystic, (5) Fibro-nodular, (6) Colloid, and (7) Vascular. The disease may present the characteristic features of any one of the types referred to, or many of the different varieties may be associated together in varying degrees, and in different situations of the gland. This fact will be readily understood when it is borne in mind that the various kinds of bronchocele are generally different stages of development—sometimes progressive, sometimes retrograde—of the simple hypertrophied gland. Exophthalmic goitre, being a disease of an entirely different nature, and one in which the goitre is but a comparatively unimportant manifestation of a neurosis, will not be here considered. In treating of the ordinary varieties the following points will be discussed: the appearance and general symptoms, the course and termination, the pathology, and the treatment.

I may here state that my attention was particularly directed to the subject of goitre at the commencement of the year 1868, and that since then notes have been taken of all cases that have come under my notice. I find that I have seen 211 cases in the last four years; of these, 36 cases have occurred in private, and 175 in hospital practice. Of the 211 cases, 54 have been of the simple variety, 101 fibrous, 39 cystic, 9 fibro-cystic, 6 fibro-nodular, and 2 colloid. As to sex, I have had 27 male patients and 184 females. Amongst the males, 6 were of simple character, 9 fibrous, and 12 cystic; amongst the females, 48 were simple, 92 fibrous, 27 cystic, 9 fibro-cystic, 6 fibro-nodular, and 2 colloid.

Simple or adenoid bronchocele may vary greatly in size, but it generally retains the form of the thyroid gland. Sometimes the hypertrophy is so slight as only to give a gracefulness to the neck; whilst, on the other hand, the enlargement is sometimes so considerable as to produce a decided deformity. Sometimes the swelling affects only a portion of the gland, one lobe, or the isthmus; but far more often the whole of the gland is more or less involved. So much is this the case that the diffusion of the swelling may almost be said to be one of the characteristic features of this variety of goitre. The other marked peculiarity of adenoid bronchocele is its extreme softness. The margin of the hypertrophied gland can generally be felt; but sometimes so soft and elastic is the swelling to the touch that it has more the feeling of a layer of adipose tissue. This form of bronchocele seldom gives rise to more than slight inconvenience, but occasionally it appears to be the cause of globus hystericus. It has long been noticed that tumours of the thyroid gland follow the movements of the trachea, but this circumstance is of little diagnostic value; for other tumours of the neck, when connected with the windpipe, also follow its movements; and, on the other hand, in large broncho-

* This paper was read before the Hunterian Society on Jan. 22nd, 1872, and was illustrated by detailed reports of twenty cases and a large number of photographs showing the appearance of patients before and after treatment. In publishing the paper in its present form, it has, however, been thought desirable to give only a few cases typical of each of the more important varieties. The woodcuts are fac-simile tracings of the photographs.

† Contribuzione alla Terapia del Gozzo. Del Dott. Francesco Parona (dalla *Rivista Clin.*). Bologna, 1871.