LECTURES
ON THE
OPERATIVE TREATMENT OF ENLARGEMENT OF THE PROSTATE.

[ABSTRACTED.]

Delivered before the Royal College of Surgeons of England.

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LECTURE II.

THE operations that have been performed for the relief of prostatic retention may be divided into palliative and radical.

The former consist, for the most part, of cystotomy or drainage, perineal or suprapubic. The most elaborate is that practised by McGuire and Morris, of New York, in which the new channel is made to run obliquely from the bladder to the upper end of the suprapubic incision, and is lined with strips of skin transplanted from the sides. In some instances the patient appears to have been able to dispense with a permanent drainage tube, and has managed fairly well by passing a catheter occasionally down the new route, and in a few even this has not been necessary.

Galvanism and electricity have been employed in many ways. Newman, of New York, speaks very highly of cauterisation of the mucous surface by means of instantaneous flashes. Biedert first, and, later, Casper and Roux claim to have effected some reduction in size by introducing the negative pole of a battery into the prostate through the rectum. Casper employed a current of about 20 milliampères, and prolonged the sittings for fifteen minutes. Roux used one as high as 70, giving very severe pain. Biedert found great improvement in 1 out of 5. Casper is stated to have cured 2 out of 4, but the amount of residual urine appears to have been very considerable still, and one was left with a rectal fistula. Of Roux's 6 patients, 1 never returned, 1 was under treatment still, and in 4 there was a sensible diminution. Many sittings, however, were required, and it does not seem certain how far the improvement was due to the electric current; reduction in size has often been noted after simple puncture.

Penile Operations.—Gouley, of New York, has recently revived Mercier's method of incising the prostate, or punching out pieces from it with a prostatectotome through the urethra, but he finally expresses himself as in favour of the perineal route, and, as part of the after-treatment consists in introducing a catheter every day for the sake of irrigating the bladder and maintaining the patency of the opening, it is difficult to see where the benefit lies. Four cases operated upon in this way by Swinford Edwards all relapsed within a few months; and in two in which the operation was repeated the period of relief was shorter the second time than it was the first.

Bottini makes use of the galvano-cautery, applying it by means of a special instrument directly to the obstructing mass. Of 77 cases thus treated, 2 died (it is only fair to say they were among the earliest), in 12 there was no result, in 11 some improvement, and in 52 complete cure. In addition, a few cases have been operated upon in England by Bruce Clarke and Hurry Fenwick. Unhappily, no definite account as to the condition of the bladder before and after the operation is appended to any of these statistics; it is merely stated that the amount of residual urine was greatly reduced—a result which is not unusual under much simpler treatment. On the whole it seems more satisfactory than Mercier's, but it shares the very grave disadvantage of being performed altogether in the dark, without any definite information as to the size, shape, or position of the obstruction. It is useless in advanced disease, or for vesical growths (the most distressing form), or for enlargement of the lateral lobes. If the obstruction is confined to the posterior wall of the urethra just at the neck of the bladder, and has not caused enlargement of the lateral lobes or elongation of the canal, it can be dealt with in this way, so far as immediate removal is concerned, provided the condition is diagnosed and the symptoms are sufficiently severe to require it; but this combination is an unusual one, and even if the operation is successful it is very doubtful if the improvement would be permanent.

Prostatectomy in the Course of Lithotomy.—This has been performed many times, usually by accident, but occasionally of set purpose, after the condition had been recognised by the finger. The result, so far as the return of voluntary micturition is concerned, is not good, though there have been a few successes; this, however, is due simply to the fact that the whole, or even the greater part, of the obstacle was not removed.

Perineal Prostatotomy and Prostatectomy.—The perineal operation consists in opening the urethra at the apex of the prostate, exploring the canal, and then dealing with the obstruction according to what is found. It may be incised and split down, or transfixed from beneath and a V-shaped piece excised. Outgrowths may be removed with an *écraseur* or twisted off with forceps. Portions of the gland may be punched out with a prostatectotome, as practised by Gouley and Norton, or the galvano-cautery may be employed.

Clearly this is much more thorough than the urethral method, but its application must be very limited. If the lateral lobes are thickened and the urethra compressed into a slit there is no space for manipulation; if they are elongated the finger cannot reach into the bladder. So long as the perineum is soft and yielding, half an inch may be gained by passing a sound by the side of the finger into the bladder, hooking it against the trigone, and drawing it down; but in most cases the perineum is loaded with fat and is much too rigid. Watson, though he was then much more in favour of the perineal route than he is now, admitted that out of thirty specimens he examined, his finger must have failed to reach the bladder in at least one-third; and McGill stated that in only three out of his first twelve cases of suprapubic prostatectomy would it have been possible to remove the obstruction satisfactorily by this route.

I have been able to collect particulars of 38 cases in all. Of these, 3 died; one, 80 years of age, from uræmia on the third day; a second from either iodoform poisoning or uræmia on the tenth day; and the third, a case of my own, from exhaustion in the tenth week. Seventeen are described as cured, and 16 as benefited or improved. Simple prostatotomy by itself appears almost as inefficient as Mercier's operation. Prostatotomy, with prolonged drainage after (for which Watson's tube is admirably suited), is very much better. Of the 11 cases in which this addition to the operation was practised, 6 are returned as cured and 2 as much improved. Two, however, were distinct failures, and in one of the successful ones a small fistula persisted. The cause of the failures is of some importance; not recurrence of the obstruction, but decline in the expulsive power of the bladder—that is, the fault is not in the operation, but in the operation having been too long delayed.

Perineal prostatectomy has better results still; of 14 cases 2 (those already mentioned) died; one was a complete failure (the suprapubic operation afterwards succeeded perfectly), and the rest were practically cured. In one, it is true, there was a small fistula, but the patient was 80 years of age, and was relieved completely both from the hæmaturia and the frequent and painful micturition from which he was suffering; and another could not empty his bladder thoroughly although his condition was so far improved that incessant dribbling was replaced by voluntary urination at intervals of three or four hours.

Occasionally it is possible to diagnose the presence of a small median outgrowth, the rest of the prostate being normal. There has been sudden retention; a catheter passes in easily, showing that there is no congestion, but not a drop will come without. On examination by the rectum the gland does not appear much enlarged, but there has been frequent micturition, with dribbling afterwards, for some time. Such cases are rare. I have met with one; in these the perineal operation succeeds admirably, but it is essential, not only to remove the salient obstacle, but to divide its base thoroughly and drain the bladder for some little time.

Dittel's Operation or Lateral Prostatectomy.—This was devised by Dittel as a means for dealing with the lateral lobes, but was first performed by Küster. A catheter is passed into the urethra and the rectum plugged. An incision is then made around the sphincter ani on one side, opening up the ischio-rectal fossa; the rectum is separated from the prostate, and a wedge-shaped portion excised from the under or posterior surface of each lobe. The object is to allow the inner or urethral surfaces to recede from each other, and leave a wider channel. The 3 cases in which Küster operated succeeded fairly well so far as the return of voluntary urination was concerned; but in one a vesicula seminalis was opened, and in 2 a urethral fistula was left. Hæmorrhage does not appear to have been severe. The operation is interesting as showing the very great importance attached by Dittel to the usually neglected lateral lobes. McGill, however, has proved that they can nearly always be excised as freely through the suprapubic incision; and there is no doubt this is the preferable route so long as the bladder is of fair size, and not small or rigid; when this is the case, if drainage will not suffice and prostatectomy is indicated, Dittel's operation is the only one that fulfils the conditions.

CLINICAL LECTURES
ON
ILLUSTRATIONS OF THE VARIABILITY OF THE SYMPTOMS OF ANEURYSM OF THE ARCH OF THE AORTA.

Delivered at the Western Infirmary, Glasgow.

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LECTURE II.

IN my last lecture I read to you the notes of a case of aneurysm of the aortic arch, in which direct symptoms were almost entirely absent. Such cases are not so rare as some might imagine, and I propose giving you to-day three more illustrations.

2. A seaman, aged 49, was admitted into the Western Infirmary on September 14th, 1882, suffering from pain in the chest and hoarseness, with some cough and expectoration. With regard to his family history, all that could be made out was that his father was alive, and that his mother died at the age of 65 from the bursting of a blood vessel. He had a sore upon the penis eighteen years before, which was followed by secondary syphilis, but with this exception he enjoyed good health until five months before he was admitted. He then began to suffer from severe paroxysms of pain in the left breast, which were brought on by exertion, and about six weeks thereafter he complained of hoarseness. This symptom did not last very long, but it returned in a month, soon after which the paroxysms of pain became much more severe, and cough and expectoration set in, the latter being for the most part mucous in character, though occasionally tinged with blood.

On examination, the usual symptoms and physical signs of slight bronchitis were found, but, in addition, there was slight dulness at the bases of the lungs, especially on the right side. There were the usual physical signs of an enlarged left ventricle, the apex beat being a little lowered, and to the left of the nipple line. At mid-sternum there was a well-marked diastolic murmur, so that the case so far had all the appearance of being one of aortic regurgitation which had led to an enlargement of the left ventricle, and secondarily to passive congestion of the lungs. A further examination, however, led to the diagnosis of aneurysm, for although there were no undoubted direct symptoms, with the exception of a suspicion of dulness over the manubrium sterni, and the diastolic basic murmur, which was probably due to aortic regurgitation, there were certain indirect (pressure) symptoms which arrested our attention.

(*a*) He complained of pain in the præcordial region on exertion: this might have been of the nature of angina pectoris consequent upon heart affection; but, on inquiry, it was noted that he frequently suffered from pain at the root of the neck between the shoulders, which is always a suspicious symptom, resulting from pressure upon the nerves.

(*b*) He spoke with a thick, hoarse voice, and he had dyspnœa, which latterly was distinctly paroxysmal, and threatened suffocation. A laryngoscopic examination yielded negative results, and the opinion which I formed was that the persistent dyspnœa was probably due to pressure upon the trachea, and the paroxysmal attacks to irritation of the left recurrent nerve.

(*c*) The carotid and radial pulses felt equal with the finger, but the latter were shown by the sphygmograph to be of unequal strength, the left being the stronger.

I could therefore come to no other conclusion than that there was a deep-seated aneurysm springing probably from the posterior aspect of the left part of the arch of the aorta.

The sequel of the case was as follows: At 4 A.M. on the morning of November 11th, one of the man's asthmatic attacks set in, and so grave were the symptoms, which at this time pointed to spasm of the glottis, that Dr. Patullo, my house-physician, found it necessary to perform laryngotomy. This gave instant relief to the more urgent symptoms, and in a short time he fell into a sleep which lasted for some hours. The tube then became displaced, and, as the breathing was easy, it was not reinserted. On November 16th, at 10.30 A.M., he had another attack of dyspnœa, and, just as it was passing off, large quantities of blood escaped from the mouth and through the laryngeal aperture, and in a few minutes he was dead.

On *post-mortem* examination the bronchial tubes were found to contain a large quantity of dark-red frothy material, and the lungs posteriorly were infiltrated with blood—indeed, almost solidified—while a large amount of blood was also found in the trachea at its lower part. There was a round bulging of its anterior and left wall, extending longitudinally for about an inch and a-half, and beginning half an inch above the bifurcation. On the surface of this projection, near the middle, a very ragged aperture, large enough to admit the tip of the index finger, was discovered, in the centre of which one of the cartilages was exposed, ruptured transversely, and projecting. The bulging was caused by an aneurysm of the aorta, springing from the posterior wall of the arch, between the origins of the left carotid and subclavian arteries, and communicating with it by an aperture just large enough to admit the point of the forefinger. The sac, which formed a rounded pouch about 2 inches in its vertical measurement, projected directly backwards. The left recurrent nerve was lost on the surface of the aneurysm. The wall of the aorta presented very great thickening of the internal coat, and this thickening was much more continuous than usual. The valvular structures of the heart presented nothing remarkable, but the aortic orifice was dilated. The mitral orifice admitted four fingers, the tricuspid five. The left ventricle was hypertrophied, and the heart weighed 14½ ounces. There were extensive degenerative changes of all the arteries.

3. On August 9th, 1881, I was asked by Dr. Samuel Sloan to see with him a foreman printer, aged 46.[1] His family and personal history were good, he was temperate in his habits, and his home life was one of comfort and happiness. His recreations were walking and rowing. About eight years before I saw him he began to take an interest in rowing, and for several years rowed at the press regatta. This necessitated about six weeks of preparatory training before each annual race. After a few years he determined to give it up, but on the next occasion he was unfortunately asked, at a day's notice, to take the place of one of the crew who took ill, being then out of training. Towards the end of the race it was noticed that he suddenly became flurried, and his stroke seemed weak and unsteady. He stated afterwards that at this time his sight left him, and he felt a sudden rush of blood to the head. At the termination of the race his sight returned, but his companions noticed that his face was intensely flushed, and this continued for a considerable period of time. From this time he often said that he did not feel "the same man," and he vowed that "he would race no more." He very soon gave up the long walks which he formerly enjoyed so much, and remained in bed till 4 o'clock in the afternoon instead of rising, as formerly, at noon. He

[1] For the details I am indebted to Dr. Sloan's notes of the case.