A CLINICAL LECTURE ON THE SURGERY OF THE MALE PERINÆUM AND EXTERNAL ORGANS OF GENERATION.

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(Concluded from page 188.)

Now let me tell you how we used to see the operation performed here in my early days, and you will see how my method grew up in my mind. A full-sized silver catheter, or as large a one as the urethra would admit, was passed down to the stricture; then the point was turned round, and pressed outward in the perinæum until it could be clearly and unmistakably felt there. Next, it was cut down upon, and the urethra was opened upon its point, and the parts in the middle line were carefully divided, until the point of the catheter could be carried on into the bladder. In this way, no doubt, a road of some kind was cleared into the dilated portion of the urethra behind the stricture, from which Mr. Cock would have made his start; and happy was the patient in whose case it was effected in any moderate time, and the catheter was then passed onwards into the bladder.

But, gentlemen, I cannot adequately describe to you the difficulty which seemed generally to attend upon this part of the proceeding. The very recollection of it is distressing to me now; and, after all, we had no guarantee that we had really followed the true course of the urethra through the stricture. Further, we had nothing really to guide us to the distal portion of the urethral track, and the efforts I have seen made to find that have been painful beyond description, and often unsuccessful after all. Was it not possible then to think out some means of simplifying this, apparently the crucial difficulty of all?

I suppose there were no greater or more skillful lithotomists in England than the late Mr. Smith and the late Mr. Teale, and in watching their operations I learned the next step in my own. They were always very careful in their teaching to point out to us the infinite danger accompanying too free division of the prostate; and Mr. Teale, in order to avoid this, invented a special dilator with which, after he had opened the urethra, and had lightly incised the prostate, he used to dilate the neck of the bladder gently to enable him to introduce his finger without violence or force; this is his dilator.

I could not help seeing how, if I could only find the posterior orifice in the urethra, after division, or supposed division of a stricture, I had in this instrument an absolutely safe guide through the prostatic urethra and neck of the bladder, along which I could not fail correctly to reach the bladder itself with my catheter; and light seemed now to be breaking in on my course. Could I make as sure of opening the urethra at a point in front of the stricture, where it was certainly healthy, as Mr. Cock was of opening it in the distended membranous urethra behind it? Yes, without difficulty I could do that. I had only to use a straight grooved staff, and stop off the last half inch of the groove, and I could not go wrong there. I had only to pass my staff, with the utmost gentleness, down to the stricture, and allow the point to rest lightly against that, without attempting to enter it, and then, if I cut straight into the groove, and followed, it till I came to my "stop," I knew that I must be exactly half an inch in front of the obstruction. Then I wanted to see that obstruction; so, with a pair of long straight nibbed pointed catch-forceps, I seized the edges of the opened urethra, and drew them apart. Then I found that, if it were not for the presence of my staff, I could probably see into the urethra, and that, if I could only draw that up a little, I should have a still better chance of doing so. I next, therefore, put a slight hook on to the end of my staff, so that, by turning it round, I could hook up the anterior angle of the wound in the urethra, draw the tube up to the surface, and look down on the face of the stricture. By the aid of very careful sponging, I found I could readily do this, and, in my first case, I was able to see the orifice of the contracted urethra, and to insert a fine director into it. On this director I was, of course, able carefully to follow the course of the contraction, and

to divide it with the absolute certainty that I had never left the true track. The stricture thus divided, I had no difficulty in passing my now freed director straight on into the bladder, and had thus secured my entrance into the posterior section of the urethra; then I had only to turn the groove in my director downwards, insert the beak of a Teale's dilator into it, pass that on into the bladder, and I had then an unmistakable guide, with the aid of which it was impossible to err.

But, gentlemen, I must not mislead you, and I am bound, therefore, to tell you that you will not always find matters so simple as this, nor will the operation always run quite so smoothly as this description would imply. I have already said that, if the stricture be a very old one, and have been long neglected, you may find the perinæum so indurated and riddled with fistulae as to make it very difficult to expose the urethra at all; and not only may it be surrounded by gristly lymph, but its course may have been greatly altered and distorted also.

When I have had such a case as this to deal with, I have usually passed as far as I could into each fistulous track, a black bristle, or some such guide—or, where I could, a very fine director—and on these I lay open each sinus till I reach its termination. Some one of them may lead me into the urethra; but I do not rely upon that, as they are often very indirect, and only communicate with the urethra in round-about fashion; but I find that they always lead to the neighbourhood, and generally more or less converge upon the true track, so that they give me some help, though they may not be altogether trustworthy guides, and, with care and patience, I generally succeed in effecting the object I have in view. And, even if you should find it impossible to make quite sure, I would not have you despair. Under such circumstances, though I have never yet done it myself, I should not hesitate to follow the example of my colleague, Mr. Robson, and entirely cut out the bad piece of the urethra, leaving Nature to form a new one around a very full-sized catheter, which I should, for that purpose, retain many days longer than usual. Mr. Robson tells me that, on one occasion, he was driven to do this, and that the case made an excellent recovery.

Or, again, I would offer another suggestion for your consideration. You will have noted, by the whole tone and tenour of every lecture it has been my privilege to deliver before you, that the bent of my mind is eminently conservative; that, looking backward through all that it can remember of the past, it clings with tenacity to that which has stood the test of time, and has proved itself to be good; that it is equally ready, on proof, to reject all that remains doubtful or uncertain; and that it is no less ready to welcome with open hands every true scientific advance in surgery. I claim, then, even while specially engaged in reviewing the past, to be permitted to look onward, also, into any vista that seems bright with hope; and, in this matter of the cure of urethral stricture, I am eminently inclined to do so.

Hitherto, no true method of permanent and lasting cure has been reached. We may dilate; we may burn out; we may split; we may cut strictures whether from within or from without; but, up to the present time, we cannot cure them, that is, both take away the obstruction and restore the parts to their primitive condition of original health.

Whatever method of treatment we may employ, however good a result we may obtain, we never overcome the tendency inherent in every stricture, and inveterate, to recontraction. If left to itself, or even in spite of occasional treatment, every stricture is doomed to recontraction, until we find some way in which the abnormal deposit of heterogeneous lymph around the urethra, which causes it, can be truly removed. To effect this, every known method has hitherto failed; but, if certain reports which come to us from America prove trustworthy and true, we are not unlikely to find in electrolysis a simple means of arriving at true cure. It is said (*Lancet*, December 5th, 1885, p. 1040) by Dr. Anderson, of Illinois, that it is capable of effecting this most truly desirable result. His words are these: "Apply electric force in a proper manner to the tissues which produce the condition we call 'stricture' and 'disintegration' results. The parts are not 'burned out,' as some infer, but the abnormal growth is resolved into its primary elements, is absorbed and permanently removed, whether the stricture be the result of injury or of the 'ordinary inflammatory causes.'"

This is too bright a light to be ignored. It may, like many another vaunted remedy, prove only an *ignis fatuus*, and may lead us no nearer the goal of true cure of stricture than other methods have done. So far, personally I have no practical knowledge of it; but, with opportunities so abundant as are at our disposal in this hospital, we shall be culpable if we do not test the matter fully and firmly, and you are fortunate in that you will be privileged to watch the results.

"Another" obstacle that sometimes arises is this; there may be "penile" strictures, which make it very difficult, occasionally impossible, at the moment, to introduce the staff as I have directed. Should this be so, I should, if I could, delay the major operation until I could so dilate these as to get the staff through; and, if matters were so urgent as to make the necessary delay improper or impossible, I should resort to some means, such as aspiration of the bladder above the pubes, or through the rectum, for the relief of immediate danger, and leave the stricture to be dealt with in after and quieter times.

Against one thing only I warn you; you must never, under any circumstances, open the spongy, that is the penile urethra, from without. A wound made into the urethra, in front of the scrotum, will infallibly lead to a permanent and most distressing fistula, which, if you ever succeed in curing it at all, you will only close with the utmost difficulty; for, readily as a wound into the urethra through the perineum behind the scrotum will heal, it will not do so in front of it.

At this point, and, having regard to the extreme importance of the subject, I might be excused if I were to branch off into the subject of stone in the bladder, and might tell you of the changes that, even in my day, have come to pass, in that wide field of surgery. I might show you how fruitless have been all the attempts, from Allarton's onwards, to shake the position of the old, and grandest of all surgical operations, that of lateral lithotomy, from its pedestal of pre-eminence; and yet, in doing so I should be compelled to show you that, whilst no cutting operation has ever been able to displace it, it is certainly doomed, in coming time, to become as rare as it has, hitherto, been frequent and successful. The introduction, by Professor Bigelow, of litholapaxy or "lithotripsy at a single sitting," and the all but universal success that has attended that operation, will, if I am not greatly mistaken, have sounded the death-knell of lithotomy in any form, except in the cases of young children, in whom the passages are not sufficiently developed to admit the use of the necessary instruments, and in whom, providentially, lithotomy can hardly be reckoned as a very serious operation.

For a few years yet to come, lithotomy will be seen from time to time; but, I venture to predict that beyond the days of the students of the present generation it will only be seen as a rarity, and only be rendered necessary by a negligence or an ignorance which will be equally culpable and unpardonable. To enter upon the subject now would be impossible, it is far too important; but, if we be spared, it may be that, at some future time, either I, or one of my colleagues, may make it the subject of one or more of these addresses. And so, this brings me to the only other region of the perineum, about which the surgeon has much to say; namely, the anal region.

Last year, my colleague, Mr. Teale, thought "the surgical neglect of the sphincter ani" a matter of importance sufficient to justify him in bringing it specially before you as the subject of an entire lecture. What he said to you concerning it, I do not know, for, at the time I am writing these lines, his lecture has not yet been published; but I, who know, or think I know, all his mind upon the subject, can very well suppose what the drift of his teaching would be. If, therefore, I repeat something of what he told you, I must ask you to pardon me, not only on the ground that a good thing will bear telling more than once, but also because it may be well to look at even familiar objects from different points of view, before coming to definite conclusions concerning them.

By London surgeons, as a rule, the operation of "stretching the sphincter" is neither recognised, nor taught, nor appreciated; indeed, I have heard of its being scouted, as unsurgical and unnecessary. It is well that you should know this, at any rate; for some of you, who, having seen the infinite good to be derived from it, having seen it regularly practised here, and having arrived at the conclusion that you believe it to be both surgical and valuable, may sometime be presenting yourselves for examination, and may there be called upon, if you aver its utility, to give your reasons for the faith that is in you, and by doing so will show your examiner that, though you and he may differ in opinion, it is not ignorance on your part that leads you to do so, nor want of thought or study, but simply conviction derived from practical knowledge.

Introduced into Leeds by the late Mr. Teale, the practice of "stretching," in preference to "cutting," the sphincter has been upheld for twenty-five years at least, and of late years has rather grown than declined in your favour. The principle upon which it is based is, of course, the one formulated and eloquently preached by the late Mr. Hilton, that the true cure for parts suffering from irritation is to place them physiologically at rest; and the ground upon which we prefer it is, that by it we can attain our end without causing an external wound, and thereby rendering our patient liable to septic poisoning.

Consider, for a moment, the position and office of the sphincter, to guard the rectum from the involuntary discharge or escape of its contents. This, so long as the rectum is at peace, it is capable of effecting easily, perfectly, and without strain, and its ordinary action is neither violent, nor spasmodic, nor irritable. But suppose some sort of irritation to have arisen in the bowel—acute diarrhoea, chronic ulceration, fissure, fistula, or piles—and what will be the state of the sphincter then? In direct proportion to the amount or of the duration of the continuance of the disease, it will become hypertrophied and strengthened to enable it to maintain its power and its office, and, in time, it comes to be enormously more powerful than is natural, or, were the parts in a healthy condition, necessary.

Piles, supposing them to be the cause of the irritation, are perpetually tending to protrusion, and are ceaselessly warring with the muscle; from time to time, when the faeces are passed, the piles are protruded with them, remaining after defaecation in the grasp of the sphincter; they are crushed, and bruised, and become inflamed and painful; and, even though they be released from their imprisonment, as they usually are, by the patient, and are returned into the bowel, it is only to continue there the war with the sphincter and to prolong the agony. Or, suppose that a painful ulcer or fissure exists within the margin of the anus, and immediately within the anus is their most common seat, what will then be the state of affairs? The discharge from an ulcer or from fissures cannot get away, the sphincter will not permit it to do so; it accumulates and irritates the muscle, this retaliates by increased contraction, and thus the war goes on, to the infinite disadvantage of both parties concerned; the ulcer spreads, the fissure deepens, and the sphincter hypertrophies.

Sometimes, in the case of fistule, matters do not become quite so accentuated or acute, for the matter finds a vent in the perineum, beyond the range of the action of the sphincter, and the direct irritation to the muscle is so much the less; but, in one and all these cases alike, you will have been, or you will be taught, and every textbook you read will reiterate the fact that, for their cure, you may do whatever you will, but you will not succeed until you have put the sphincter at rest, and you are invariably assured that its division with the knife is the only way to do it.

Now this is the point which we in Leeds contest. We assert, and we assert it upon abundant practical experience, that careful, deliberate, and efficient stretching will do all that incision will do, and, doing it without causing any external wound, will subject the patient to far less risk than is possible by incision. Some of you may smile at the idea of there being any risk in so simple an operation as division of the sphincter, but there are such things as accidents; Sir James Paget has most appropriately termed them "catastrophes of surgery," which ought never to be forgotten and should be avoided, where possible, by any amount of foresight on the part of the surgeon. One such, in connection with the subject under consideration, happened to me in my early days; and, so profound was the impression it made upon me, that to forget it even now is quite impossible. For a painful fissure of the anus, I passed a bistoury along its track, divided its indurated base, and, with that, the resisting sphincter underlying it; but in less than a week my patient, the father of a young family, was dead, having very speedily after the operation been attacked with acute and fatal septicæmia. By stretching in preference to cutting, we have it in our power to avoid this risk, at any rate; and, in my experience, the best method of doing it, where possible, is with the fingers, or, if need be, the thumbs alone. Let the patient be placed fully under the influence of ether, and then, according to the amount of the hypertrophy, or the degree of resistance in the sphincter, dilate it steadily, either with the fingers, or with some appropriate instrument, until you have overcome all undue resistance, and can leave the anus soft, patulous, and free from irritable tension.

I have heard the question carefully discussed, as to whether the digital or the instrumental method of dilatation is the best. Personally I prefer the digital, because, my object being to tear so much of the muscle across (the mucous membrane over it remaining intact) as shall be sufficient to diminish, without destroying its whole power, I can, when my fingers are the instrument used, feel with them when I have done what I wish, and I need do no more. But so great is the hypertrophy sometimes, that the fingers, even of the strongest hands, are quite inadequate to the task of overcoming it. In such cases I usually dilate steadily first with the instrument I show you, till I can withdraw it (wide open) with freedom and without resistance; or, with a tenotomy knife, I divide subcutaneously a given proportion of the hypertrophied muscle; and after that I carry on, where it is necessary, any further dilatation with my fingers.

Gentlemen, I commend this proceeding to your careful study and

consideration; and the more thought you give it, and the more experience you have of it, the more, I feel confident, will you cling to it as a decided advance in surgery.

ON ADDISON'S DISEASE.

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FOR nearly a quarter of a century, Addison's disease has been recognised by the medical profession in England. More have believed in its specific existence, more have worked at its pathology in this country, than in any other. And yet to-day our knowledge on the matter is but little greater than when its first historian died. And this is the more to be deplored, because we have not here a mere medical curiosity, of rare occurrence, of definite duration, of certain cure, but a disease which has killed its hundreds, whose course is not accurately known, whose pathology and etiology are involved in obscurity, and which is still an *opprobrium medici*; for hitherto, I believe, no case of permanent recovery has been put on record. Our present knowledge may be very briefly summed up. The patient suffers from intense weakness, which gradually but steadily increases, despite all treatment. He is languid, and utterly indisposed for any exertion of body or mind. He generally suffers from breathlessness on exertion, from anæmia, from pain in the epigastrium and across the loins. There are usually no physical signs of disease found to account for the symptoms, and these are at first diagnosed as due to atonic dyspepsia, and the patient is treated accordingly. But the asthenia and the intense feebleness of the heart increase; the anæmia does not diminish, and, if the patient live, a new feature presents itself, or, in some cases, is evident before the onset of the constitutional symptoms. The skin becomes abnormally dark, and this pigmentation increasing, and extending, may cover the whole surface, and give the patient the aspect of a mulatto. Then, with still advancing feebleness, comes death, either very suddenly or in gradually deepening coma; and, on *post mortem* examination, we find caseous degeneration of one or, more commonly, both suprarenal capsules, with chronic inflammatory changes in their immediate vicinity. Now, some argue that these bodies play no essential part in the disease. But, inasmuch as in some hundreds of cases showing the above symptoms during life, a caseous degeneration of the adrenals was the only or chief lesion found after death, it is only logical and scientific to conclude that there may be, and probably is, a very close connection between them. And inasmuch as in nearly every case where the capsules are, *post mortem*, found in an advanced state of caseation, pronounced symptoms of Addison's disease have been noticed during life, it is hard not to believe that the relation between the facts is simply one of cause and effect. Now, the constitutional symptoms have for many years past been generally supposed to be due to nerve-changes. These, for example, would cause the relaxation of the abdominal vessels, and so the intense blood-stasis evidenced by the condition of the spleen and mucous membranes, and the consequent external and cerebral anæmia. In like manner, the characteristic cardiac, gastric, and pulmonary symptoms, are explicable as due to reflected nervous irritation. So far we know or we theorise at present; but now three great practical questions suggest themselves. 1. What is the cause of the bronzing? 2. What is the seat of the cause of the constitutional symptoms? 3. Will increased pathological knowledge suggest a method of cure? It is the object of this communication, first, to detail a well marked case of the disease, and then to offer some original and, it is hoped, some practical views on the above questions.

William McC., a labourer, aged 33, was admitted into the London Hospital on September 22nd, 1881, under the care of Dr. Samuel Fenwick. The following is an abstract of his case. He had always been addicted to beer, generally consuming from five to six pints a day. He had suffered from gonorrhœa and a soft chancre fifteen, and from typhus fever twelve, years ago. Otherwise, except for an annual attack of psoriasis, his health had always been very good. Four months before admission, he suffered from a "cold," attributed to exposure, and never felt well thereafter. A month later, his urine became scanty, scalding, and high coloured. He began to suffer from vomiting, headache, giddiness, and great lassitude, and ceased to work. These symptoms steadily increased in severity. On admission, he was noted to be a well made, fairly well nourished man, anæmic, deaf, and very dull both in mind and manner. He slept badly, ate

little, and rarely spoke. He lay in bed utterly "limp," and profoundly quiet. There was tenderness on pressure over the epigastrium, the left hypochondrium, and the spines of the first and second lumbar vertebrae. The skin was in no part abnormally dark; the tongue generally appeared red at the tip and edges, with fur down the centre and at the base. The teeth were regular and good. There was no discoloration of the gums or inside the cheeks. He occasionally vomited, and complained only and entirely of weakness and lassitude. There were no marked physical signs of disease in the chest or abdomen, but the heart-sounds were dull and feeble, and the first sound, both at the base and apex, was prolonged. The pulse varied from 72 to 80, always weak and compressible; the respirations generally about 18, easy; the temperature between 97.6° Fahr. and 99.2° Fahr. The urine was straw-coloured, faintly alkaline, with a specific gravity of 1012 to 1015, with albumen always present, from a mere trace up to about one-half on the morning of his death; the urea was generally 1.3 per cent., and there was usually a deposit of phosphates and epithelial casts.

On September 27th, Dr. Samuel Fenwick saw him, diagnosed Addison's disease from the constitutional symptoms, and prognosed death, probably by syncope, at an early date.

On September 28th, the patient endeavoured to get out of bed against orders, and fainted. He rallied, but died suddenly a few hours later.

The necropsy was made twenty-nine hours after death. Much adipose tissue was found beneath the skin and around the various organs; the skin seemed generally dark compared with that of a very fair-complexioned body next to it, but not abnormally so, and no patches of pigmentation could be found. The liver was fatty, and weighed seventy-two ounces; the spleen was enlarged and congested. The kidneys, lungs, and heart were perfectly healthy. The brain and spinal cord, the nerves in the vicinity of the capsules, the blood-vessels, and the spinal column were all closely examined, and presented no naked-eye changes. There was no ulceration or evidence of tubercle in the intestines or peritoneum, but the mucous membrane of the stomach and duodenum was of a dark slaty colour, and covered with a thick ropy mucus. Microscopically, the gastric tubules seemed fewer than normal, but no abnormal pigmentation was found. Both suprarenal capsules were enlarged, hard, and nodulated. On section, it was found that the normal gland-tissue had been transformed into a translucent softish grey matter, mixed with a yellow opaque substance, which in parts was quite calcareous and gritty. It was very observable that the former translucent appearance seemed almost confined to the cortical portion, while the central or medullary part seemed to be mapped out in white, and also that this caseous material was much more abundant at one end of each capsule, gradually diminishing in extent thence to the opposite extremity of each organ. Microscopically, except in parts here and there of the cortex, no normal structure could be found. It all appeared to be transformed into a mass of oïd globules, scattered fibrils, and a few small indifferent cells.

The chief point of interest in this otherwise typical case, was the absence of all bronzing of the skin. It suggests afresh the old question, "Why should bronzing occur in most cases, and yet not in some few others, of undoubted Addison's disease?" In the hope of obtaining some faint light on this matter, I collected and tabulated all the cases of the disease recorded in the last sixteen volumes of the *Transactions of the Pathological Society*, and this in order to be sure that each case had been critically tested and typical. I now desire briefly to lay before the profession the facts the above obtained table exhibits, and the theory as to the course of the disease which these facts seem to support.

1. *Age*.—The average age at death in males was 30.1 years; the extremes were 5 and 55. The average age in females was 35 years, the extremes being 19 and 55.

2. *Sex*.—Of the thirty cases in the table, 23 were men, and only 7 women, or rather more than three of the former to one of the latter. In Dr. Wilks's classical monograph on the subject, he gives (p. 18) the proportion of his cases as 19 men to 6 women, or almost exactly the same ratio. Dr. Headham Greenhow, however, in the Croonian lectures for 1875 (p. 94), deduces from his collection a much lower proportion; namely, 119 men to 64 women, or not quite two to one.

3. *Duration of Illness*.—This varied very much, and very remarkably. (a) For bronzed cases the average duration of life from the onset of the symptoms was 23.6 months; the extremes being (?) three months and five years; but (b) in non-bronzed cases the average was only 4.8 months, the limits being six weeks and twelve months.

The fact seems remarkable at first sight, but the more it is considered the more remarkable does it become. Dr. Addison thought that in some cases bronzing did not occur, because the patients did