Original Communications.

TEN YEARS OF OPERATIVE SURGERY IN THE PROVINCES.

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IV.—Operations on the Genito-Urinary Apparatus.

The fourth division comprises the surgical operations performed upon the genito-urinary organs. They are numerous and important, and I have arranged them into the following five subdivisions:—Operations upon the Urethra, including Urethral Calculi, Extraneous Substances, the Relief of Retention, and Cases of Extravasation of Urine; Circumcision and Amputation of the Penis; Operations for Hydrocele, Hematocele, and Castration; Cases of Enlarged Clitoris, Epithelioma of Vagina, Obliterated Vagina, and Vascular Tumours of the Meatus; and lastly, Lithotomy and Lithotrity in Male and Female.

Urethral Operations. Case cvii. H. W., a weakly boy, aged 17, had suffered for many years from symptoms of stone. He was obliged to press his fingers against the scrotum as he was making water, in which he experienced considerable difficulty. A stone was lodged in the urethra in front of the bulb at the posterior edge of the scrotum. I made a short longitudinal cut into the urethra down upon the stone, which flew out upon pressure. It was about as large as an olive, and of a well marked spindle shape, smooth, and of a pale colour. I then sounded him, but found no stone in the bladder; and therefore left a gum elastic catheter in the urethra, and brought the wound together with a pin. The union went on but slowly, but he had no bad symptoms which could be referred to this operation; at the same time, the boy grew thin, his pulse was rapid, and he had a considerable cough. As his surgical ailment was almost well, I transferred him to the medical wards, under the care of one of the physicians. His cough grew worse, and suppuration came on among the muscles of the thigh; and he died of phthisis three months after the operation.

The calculus was lithic acid outside and oxalate of lime internally.

Case cviii. G. B., aged 5, with difficulty of passing water. I found a stone impacted in his urethra just behind the scrotum, and tried to remove it by various instruments, but in vain. I therefore made a section down upon it, and removed a rough and irregularly rounded oxalate of lime stone. A good deal of disturbance of his system followed, and an abscess formed on the dorsum of the penis, which required to be opened, and then he soon recovered.

Case cix. J. A., aged 30, the subject of stricture of the urethra of ten years standing, was in the habit of passing a piece of gutta percha into the urethra, and walking about without taking any precaution to prevent its slipping in; and this happened on the morning of the third day before I saw him; and he felt but little trouble from its presence. The anterior extremity of the bougie could be felt at the margin of the scrotum, but could not be withdrawn.

After trying in vain various methods to extract it, I cut down upon the foreign substance, and withdrew it; and passing a director through the stricture forwards, slit it up, with some little difficulty, on account of its great hardness. A full sized catheter was then passed into the bladder, and retained. After some little suppuration, which seemed to interfere with the healing of the wound, it gradually closed, until a fistula remained. This was pared and brought together by a pin, and ultimately healed. It was necessary to pass a catheter daily during the latter part of the treatment; but after the fistulous opening had entirely healed, the stricture lost its tendency to close. He was quite well three years after the operation.

Retention and Extravasation of Urine. Case cx. R. J., aged 64, who had been afflicted with severe stricture for many years, was admitted under my care suffering from partial retention, for he only made water by drops. During his stay in the Infirmary, an abscess formed in the perineum, which I punctured, and it healed up, there being no direct communication between its cavity and the urethra. After the lapse of six weeks, he became much worse, and absolute retention came on. At no time had I been able to pass a catheter beyond the bulb. The urgency of the symptoms increasing, I operated; and cutting into the middle line of the perineum, succeeded at once in opening the urethra beyond the stricture and passing a gum elastic catheter into the bladder, and the urine flowed out readily. The instrument was retained in his bladder, and I hoped that he was placed in a position to recover; but instead of this he grew weaker, and about eight days after the operation vomiting and shivering occurred. These symptoms were relieved by brandy and a few large doses of quinine, and he improved, the water flowing readily from the wound. A fortnight after the operation, hæmorrhage from the bladder took place, and he died on the nineteenth day.

Post Mortem Examination. A female catheter passed readily through the wound into the bladder. The stricture allowed the passage of a director; the prostate was healthy; but the muscular coat of the bladder was much hypertrophied, and there were six ounces of coagula in it. There was fatty degeneration of both kidneys, and abscess in the right one; but little of the healthy structure remained, and numerous cysts were found in and upon them. The rest of the organs were healthy, and there was no urea in the blood.

The kidneys in this case were too diseased to enable the patient to recover his health; and it is not impossible that the more rapid flow of urine which occurred from the time of the operation, interfered with their action, and with any attempt at repair they made. The fact that patients who have suffered for a long time from retention, and in whom the urine has for any reason begun all at once to flow freely, will die abruptly without any very obvious cause in the course of a few weeks, has been observed by Sir B. Brodie, but not by many other writers.

Case cxi. J. H., aged 68, an old soldier, with a long standing stricture. He had been a patient at the Bristol Royal Infirmary for twenty-three years at various times, and most of the surgeons had tried on different emergencies to relieve him. No instrument had entered his bladder for eight years before he happened to come under my care; on which occasion he had retention, and some of his urine dribbled away; there was also a collection of pus in the canal about the position of the bulb, for upon pressure he could get rid of it. As no instrument would pass the stricture, I cut into his perineum on the raphe, and after dividing freely some very hard cartilaginous tissue, I opened the membranous portion of the urethra, and passed a female catheter into the bladder. I then thrust a male catheter through the stricture into the wound, and guided it thence into the bladder, when it was made fast and retained. I gave him some opium and brandy, and he soon revived, passing water freely through the catheter. The appetite was good. I kept this instrument in the bladder until the sixth day, when it was withdrawn, and another introduced. On the ninth day, all the water passed through the urethra, and a full sized catheter could be readily introduced. As he was an experienced patient, he was directed to do it himself occasionally; and after a few days he went out, much improved in health, and able to make water more easily than he had done for five-and-twenty years. I met the old man after this operation very frequently; and received satisfactory accounts of him long after he left my care.

The only points in this case which I wish to draw particular attention to, are—the difficulty of the operation, and its very great success, and the contrast it offers to the last described case, where an operation, apparently equally successful, did not keep the patient from sinking from the effects of the stricture and retention.

Case cxii. J. B., aged about 40, was admitted as my patient, suffering from extravasation of urine. He had passed water *guttatim* for six weeks; and four days before admission the scrotum began to swell; and, upon the day of his admission, whilst he was straining to make water, the penis suddenly became infiltrated, and attained an enormous size. I passed a catheter into a cavity in front of the bulb, and drew off some pus, urine, and blood; and afterwards, I succeeded in passing one into the bladder, whence I drew some clear urine. This instrument was retained, and I cut freely into the perineum, penis, and made four deep and long cuts into the scrotum. By the fourth day the water had leaked out of the penis, but the swelling of the scrotum remained. He was very low and weak, and I gave him some wine. A large slough formed in the perineum and lower part of the scrotum, which came away. The catheter was withdrawn, black and encrusted with phosphates, and another occasionally passed without much difficulty. All the urine passed through the hole in the perineum

until the twenty-first day, when he reported that some came the right way. In a month more the large wounds had healed, and he passed urine freely in a stream entirely through the urethra, and much better than he had done for the previous twelve years.

Case cxiii. J. C., aged 41, was admitted with extravasation of urine of four days standing, the stricture which caused it having existed for twenty years, having been, according to his report, the result of an accident. The scrotum was swollen as large as a child's head, and a tumour pointed in the perineum, shewing the position of a large slough there. I cut deeply into the perineum, and very fœtid pus and urine flowed out; and I also incised the scrotum on each side. The urine soon came in all directions, and flowed freely. A vast slough separated from the scrotum, perineum, and the side of the anus; but, notwithstanding this loss of substance, after careful watching for thirty-three days, he went out cured. His diet was good, and I allowed him some strong beer, and simply some tragacanth mixture with potash to relieve the irritation of the urine upon the wound. When he left the Infirmary, he could pass water in a better stream than he had done for many years.

Case cxiv. A. B., admitted with extravasation of urine, in consequence of retention following a long standing stricture. After cutting into the scrotum and perineum, I managed to introduce a catheter into his bladder. There was a very free discharge of fœtid pus from his perineum. With the aid of good diet, he soon improved; and when he went out, his wounds were nearly healed, and he could make water easily.

Case cxv. H. B., aged 40, had a gradually and slowly progressing swelling of the scrotum for nearly a fortnight; and when he was admitted as my patient, the disease had in a considerable degree run its course; and there was sloughing of the scrotum and cellular membrane of the perineum, with a discharge of pus and urine. A further opening was made, and all went on well. He was discharged cured in about a month, able to pass water very freely; and I saw him several years after this occurrence, and he was still quite well.

Case cxvi. E. B., aged 30, was admitted under my care with extravasation of urine; the penis, scrotum, perineum, and pubis, being much swollen and very painful.

I tried under chloroform to pass an instrument into his bladder, but it entered a perineal abscess. I therefore opened his perineum, freely letting out a large quantity of fluid pus, blood, and urine; made two deep cuts into the scrotum, and made also two incisions above the pubis; and, whilst doing this, a little to the left of the middle line of the body there was a sudden large jet of bright arterial blood, apparently from a vessel as large as the radial artery, although I had not cut into the muscles. It was tied at once; and, when my finger was upon it, it pulsated very strongly; and I can only imagine it to have been the epigastric artery running very superficially.

This patient felt much relieved as soon as he recovered from the chloroform, and he went on well afterwards, the urine flowing first from the wound in the perineum, also from the scrotum, and for a short time it came away in a full stream from the aperture I had made above the pubis. He went out with the wounds healed seven weeks after the operation of cutting into the perineum, and has been able to pass urine much more freely since.

Case cxvii. S. J., aged 34, was subject to stricture of the urethra; and one night, his son, a boy, sleeping in the same bed as his father, but with his head towards the bottom, accidentally gave him a kick in the perineum. He suffered much from this little accident; and on the fourth day, the swelling of the penis and scrotum commenced; and for this, he was treated by a surgeon of this town by purgatives and leeches to the scrotum, under the idea that he had inflammatory swelling of the parts. I did not see him until the eighth day, and then he was very pale and collapsed, and almost pulseless. He had well marked urinary infiltration in the penis, scrotum, perineum, and pubis, and a dulness in the lower part of the abdomen, showing that water was still retained in the bladder. I tried to pass a catheter, but failed; I then cut through by consecutive cuts with Stafford's instrument a long stricture in the spongy portion of the urethra, thrusting on the instrument as far as I could at each cut; but not being quite certain of the direction of the parts, in consequence of the swelling of the penis and scrotum, I had him held up, and cut into his scrotum and perineum; and in the latter region I tried to hit upon the urethra, but having no guide, I did not succeed. I therefore tried again to introduce an instrument through the urethra, and, by exercise of some little force, succeeded in getting in No. 4, and leaving it there, after drawing off the water. He was excessively weak and collapsed for some days, and then he had symptoms of peritonitis, shewing themselves by constipation, difficulty and disinclination in making water, with great distension and abdominal tenderness. This condition resisted the effort of a dose of castor oil; and I therefore ordered him a little blue pill and opium, with the best effect; for by its aid his bad symptoms subsided. I did not cut into the penis or above the pubis, and the result was that a slough formed in each place. A large part of his scrotum also sloughed, and came away. He required a considerable quantity of stimulus.

This patient went through weeks of excessive illness and peril: profuse diarrhœa, loss of appetite, and rigors. He ultimately recovered completely, and went to work.

In the four following cases, extravasation of urine was fatal.

Case cxviii. J. C., admitted with partial retention, from an old standing stricture. I could not pass a catheter into the bladder; but, after repeated attempts, he managed to make water. I gave him some opium to ease his pain, and ordered him a warm bath. His scrotum was red when he was admitted. The next day he told me that he had passed water, but he became much worse, and it was evident that he had extravasation of urine. I cut into his perineum, and tried to introduce a catheter, but it passed into a slough below, and the point could be turned out through the wound. I made four cuts into the red and swollen scrotum. The next day he had diarrhœa; but the urine flowed freely through the wound, and he seemed otherwise better. He had some wine daily, but he gradually got into a typhoid condition, and died on the eleventh day from the operation.

Post Mortem Examination. We found sloughing and suppuration of the cellular tissue of the perineum, but none in the pelvis. He had abscess of the prostate, great thickening of the muscular coat of the bladder, dilatation of both ureters, suppuration in the substance and pelves of both kidneys, and obliteration of all the secretory structure of the right.

This patient was too much damaged by the evil effects of the long standing stricture upon his urinary system, to allow of any repair.

Case cxix. E. E., aged 40, with extravasation of urine from old stricture and retention. When he was admitted, he had great pain and redness on the left side of the scrotum and perineum, and the urine dribbled away. I operated on the evening of his admission, and succeeded in passing a catheter. I then cut into the perineum, and opened an abscess, from which pus and urine flowed; I then made three cuts into the scrotum, to let out the serum and urine, and gave him some wine. Diarrhœa followed in this case also, and he became much weaker; and died on the tenth day with signs of pyæmia.

Post Mortem Examination. I found his bladder tolerably healthy. There was pus in the left tunica vaginalis, suppuration above the pubis, a large abscess above the right shoulder, with sloughing of the cellular tissue, a rough state of the clavicle, abscess above each elbow, and suppuration of the lungs and kidneys.

It is said that pyæmia is more likely to follow operations about the perineum and neck of the bladder than any other region of the body, and this was a well marked instance of that state, with the numerous secondary abscesses. It has not been the result of my experience to find pyæmia more frequent in these cases; at the same time, the existence of a mass of large veins round the neck of the bladder, surrounded with hard fibrous tissues, is the anatomical condition likely to encourage the mixture of pus with the blood, where suppuration occurs in the neighbourhood.

Case cxx. E. K., aged about 45, a sailor, having just returned from a long voyage, indulged himself in excesses of all kinds for many days together. He had been the subject of stricture previously. While living in this way, one morning, retention of urine came on, but in the evening he passed a little water; but a few days before this date he had suffered from a severe shivering fit. On the fourth day after retention began, the scrotum and penis began suddenly to swell, and it was obvious that the urethra had given way, and it was in this state that he was admitted.

I gave him chloroform and succeeded in passing a catheter, and then made some free incisions into the scrotum, and afterwards gave him some stimulus in the form of gin. He went on for a few days, occasionally better, at other times worse, and a large slough formed on the scrotum and perineum, discharg-

ing pus of a very fetid nature; and he gradually sank on the twelfth day after his admission.

At the *post mortem* examination, besides the slough in the superficial parts visible during life, we found a sloughing condition of the whole length of the urethra, which was black throughout.

This was clearly one of the cases where abscess formed outside the urethra behind the stricture, in consequence of great irritation produced by the patient's mode of life, and where the canal gave way suddenly and extravasation followed.

Case cxxi. W. C., aged 49, the subject of an old stricture, which had undergone various treatment, found that the difficulty of passing water increased suddenly, and soon afterwards he noticed that the scrotum began to swell. This was followed by pain, shivering, swelling of the penis and perineum; and in this condition he was admitted under my care. I opened the perineum and scrotum very freely, and also the penis, on which a spreading black patch had formed. His pulse kept tolerably good, but the local condition did not mend, although the slough on the penis did not extend much. He gradually sank, and died on the twentieth day after his admission.

Nothing worthy of any special notice, besides the local damage, was found at the *post mortem* examination.

Remarks. As some operative measures were requisite in the management of these cases of extravasation of urine, I thought it fair to introduce them here, although they would hardly be included in a systematic work on operative surgery. The results were as good as usual in such very severe and generally unsatisfactory cases, for six recovered out of ten. There are few professional emergencies which we have to deal with requiring more skill and patience and surgical courage, than these wretched accidents of urinary infiltration; occurring, as they generally do, in men of broken down health and dissipated habits, in whom an ordinary cutting operation would very probably prove fatal. This accident, I suppose, is in these days almost unknown in the middle and upper classes of society; but, as the foregoing list will prove, among the lower classes in large cities they are not very rare.

In performing the necessary operations in these cases, the free incisions should be made *before* the attempt to introduce the catheter, for the urine and serum, and pus if it is present, soon leak out of the tissues, and the tension is taken away from the urethra immediately, and the catheter is more likely to pass readily into the bladder. I have on more than one occasion been able to pass an instrument after the perineum has been opened, having failed immediately before.

In each of the successful cases, the patient was able to make water much more freely than before; in other language, the extravasation of urine was the perilous and complex method in which nature attempted to cure the stricture and the retention; the narrowed urethra sloughs, and a better one is made, provided the patient has strength to undergo the process and to survive it.

Hæmorrhage from the Urethra. I have had under my care two cases of severe hæmorrhage from the urethra; and as they are productive of considerable anxiety to the surgeon, and much alarm to the patient and his friends, I will describe them here, without numbering them among the cases of operation, with which they cannot be classed.

The first was aged 44, and the hæmorrhage came on suddenly four days after a catheter had been passed. He was brought to the Infirmary after he had lost a considerable quantity of blood, and had tried various means to stop the bleeding. A full sized catheter was introduced, and kept for some time (a quarter of an hour) in the urethra, and the bleeding ceased entirely.

The second occurred in a young man in whom I had passed a catheter (No. 8) twenty-four hours before at my house, and he had walked home easily; no mark of blood having appeared at the time the instrument was used. I received an urgent message to go to see him, and found him faint and pale, sitting in despair, with his drawers and trousers saturated with blood, which had commenced to flow without any pain or exertion on his part. After getting rid of all his incumbrances, I rolled up a hard pad, and put him to sit with his bulb pressing upon it, for I knew that the stricture was there; and I gave him half-drachm doses of turpentine every two hours, and he had no further bleeding.

The blood in these cases came on some time after the use of the instrument, namely, four days and one day, and is therefore likely to be more obstinate than when it occurs at the time. Ulceration in the mucous membrane and an aperture into the vascular part of the spongy body are the pathological conditions giving rise to the symptoms.

My two cases illustrate well the effect of pressure applied internally and externally, and I believe that by one or other or both of these methods hæmorrhage may be checked readily; and I may add, that turpentine is the best styptic; so much so, that in a case where an operation was called for and loss of blood to be avoided, I should like to give my patient half an ounce of turpentine about half an hour previously; but this I have not yet had occasion to do.

[*To be continued.*]

EXCERPTS FROM DAILY PRACTICE.

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III.—*Case of Extensive Pelvic Abscess. Fluctuation felt first in the Right Lumbar Region, afterwards in the Right Iliac Fossa, and in the Upper and Inner Region of the Thigh. Splashing and Tympanitic Sounds. Difference of opinion on Treatment. Spontaneous Discharge of Fœtid Pus. Recovery. Remarks. Diagnosis. Inflammation of the Cæcum. Abscess of the Kidney. Abdominal Parietal Abscess. Subperitoneal Abscess. Postfascial Iliac Abscess. Psoas Abscess. Diagnosis of Psoas Abscess not always easy. Whence came the Air? Treatment. Dr. Gurdon Buck's Plan of Opening Iliac Abscess. Prognosis.*

On April 17th, 1857, I was requested to see a gentleman, a member of the medical profession, who was said to be very ill from some internal injury. I gleaned the following history of the case: namely, that for some time he had complained of pain, which at first was confined to the loins, and was not severe, but became gradually more so, and extended to the right iliac region. About three weeks before my visit, the pain had become so severe as to prevent the possibility of his dressing. At first he considered it to be of a rheumatic character, and took aperients freely, but without relief; he then called a neighbouring practitioner to his assistance. His friend, suspecting some fæcal accumulation within the cæcum, prescribed the compound decoction of aloes; and believing that there was inflammatory mischief about the cæcum, ordered the application of leeches. The pain still continued, and every attempt to move was accompanied with the most excruciating pain in the right iliac and lumbar regions. He became rapidly much weaker; and pain of a "scalding" "burning" character came on in the front and inner side of the thigh, extending nearly to the knee. Along the crest of the ilium, there was considerable tenderness on pressure; and some slight œdema was present in the neighbourhood. Blisters were applied extensively and frequently. The bowels were freely acted on by aloetic purgatives, and some scybala passed. No relief followed; and he was put under a course of calomel and opium to slight ptyalism.

This was the state of things up to the time of my first visit, on the 17th of April. Our patient was 52 years old, usually of spare habit of body, but now wretchedly reduced. He complained severely of the "burning" pain in the thigh as far as to the knee. His pulse was 95; his tongue was moist and clean; his countenance was somewhat anxious; the bowels were regular; but sleep was very deficient. The thigh was kept in a flexed position, and any attempt to extend it was accompanied with severe pain. On careful examination, I thought I could detect deep fluctuation in the right lumbar region, immediately above the crest of the ilium posteriorly; but it was evident, that as yet the matter was deeply seated. Pressure here increased the pain down the thigh. We agreed upon the constant application of the spongio-piline to the back; on the administration of a generous, nutritious, but unstimulating diet, and a morphia draught each night; and enjoined the strictest rest.

On April 23rd, our patient was still weaker, and suffering much pain when not under the influence of morphia. The fluctuation had become more distinct in the lumbar region, and the fluid was evidently somewhat nearer the surface. Deep in the right iliac fossa, I could detect a circumscribed swelling, and fluctuation. On placing the left hand firmly over the lumbar region, and pressing the deep iliac swelling with the fingers of the right hand, the fluctuation could be distinctly