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RADCLIFFE INFIRMARY, OXFORD.

CASES OF LITHOTOMY: WITH CLINICAL REMARKS.

By E. L. HUSSEY, one of the Surgeons to the Infirmary.

CASE I. A stout hearty boy, 9 years old, living in the country, was brought to the Radcliffe Infirmary, 20th June 1855, to be treated as an Out-patient, for strumous ophthalmia, from which he had been suffering since the last autumn. In answer to general questions about his health, his mother mentioned occasional pain or difficulty in passing urine. Farther inquiry left little room to doubt that he had a stone in his bladder. He had passed blood with his urine at times, especially after taking exercise. He was often seen to be pulling the prepuce, or pinching the penis. These symptoms had existed several months, without advice being sought. He was therefore admitted an in-patient.

The calculus having been felt by sounding, the lateral operation for lithotomy was performed on the 30th of July; and a flat oval calculus, composed of lithic acid, was extracted, weighing forty-four grains.

In the evening of the 1st of August, some urine passed freely by the urethra; and in the night, that which he passed by the urethra, and that which flowed by the wound, was much stained with blood. The opening in the bladder was probably healed by the 5th; for after that day it was doubtful whether any urine could be detected in the discharge from the wound. On the 7th, after a dose of castor oil, the bowels were freely open—the first time since the operation. The wound in the skin healed slowly. For this reason, and because of the disease in his eyes, he was not discharged till the 5th of September.

With the exception of a return of the ophthalmia in the winter, he has continued in good health. (240.)

CASE II. A boy, 8 years old, of strumous, but not otherwise unhealthy aspect, of irritable temperament, was sent to me by a medical friend in the country, with a request that I would sound him, as he thought the boy had a stone in his bladder. The boy had suffered from disease of the urinary organs about eight months; he was also subject to diarrhoea. Upon passing a lithotomy staff, I thought it struck a stone.

He was admitted into the Infirmary, 11th July 1855. The lateral operation was performed on the 30th; and a calculus, something in shape like an olive, was extracted, composed of triple phosphate, and weighing forty-one grains. In passing the knife (a straight scalpel) along the staff, it accidentally slipped out of the groove, and wounded the rectum; and the forefinger of my left hand followed it within the gut. No faecal matter escaped; and the accident was not observed by the bystanders.

Aug. 1st. The nurse reports that, since the operation, the boy does not sleep soundly; he wakes suddenly, and in a fright. His pulse is very quick, generally between 120 and 130 when counted—quickened perhaps by his timidity, and by the appearance of attention given to it. This morning he has diarrhoea. A powder, consisting of Hydrarg. c. cretâ gr. iij; Pulv. cretæ comp. c. Opio gr. v; and Sodæ sesquicarb. gr. v, was given, and repeated in four

hours. In the evening, he passed some urine by the urethra.

Aug. 2nd. The diarrhoea returned to-day, some faecal matter being discharged by the wound. He passed a little urine by the urethra; and it continued to flow freely by the wound. The powders ordered yesterday were given again to-day.

On the 6th, he passed the first solid motion since the operation.

With the exception of slight return of diarrhoea, and on one occasion (Aug. 20th) some clotted blood passed *per anum*, he went on well till the end of the month, when the scrotum was observed to be much swelled. The right testis and cord were slightly enlarged, and painful to the touch. He had been allowed to get up, and walk about the ward: he was now ordered to bed again. On the 5th of September, a small collection of matter was discharged through the scrotum; after which he recovered quickly.

He left the Infirmary on the 19th of September, and has continued in good health. (241.)

CASE III. A carpenter, 36 years of age, unmarried, a stout hearty man, living in the country, applied to me on account of irritability of the bladder, and other symptoms indicating the existence of stone. He applied, as it seemed to me, chiefly because his father had lately, at short intervals, passed two or three small stones by the urethra. Under my advice, he was admitted into the Infirmary, 14th Nov. 1855. Upon more minute inquiry, it was learned by degrees that he had been suffering from disease of the urinary organs for more than three years. Lately his sufferings had been so great that he often got out of bed in the night, and walked about the room, seeking relief from change of position.

A large calculus was readily detected on passing a silver catheter; and on the 4th of December, the lateral operation was performed. The space between the tuberosities of the ischia seemed to be less than usual. The perineum was deep, and much loaded with fat. After cutting through the prostate, I guided the forceps along the staff into the bladder, and with some difficulty seized the calculus, in the transverse diameter. In trying to withdraw it through the wound, the forceps slipped, and the calculus fell back into the bladder. After some farther delay, it was again seized (this time in its long axis), and extracted. It was a large thick oval of lithic acid, $3\frac{1}{2}$ $3\frac{1}{4}$ gr. xv in weight, two inches and three-eighths in length, one inch and thirteen-sixteenths in breadth, and one inch and three-eighths in thickness. Its greatest circumference was six inches and three-quarters; its smallest, five inches.

In the evening, and in the early part of the night, the urine flowed freely by the wound. At night, a pill (Opii gr. j) was given, and a draught with Vini Opii mxxx.

Dec. 5th. He complains of pain above the pubes, and in the left iliac region: is much distressed by vomiting. Little or no urine passed. A pill, composed of Hydrarg. chlor. gr. ij; Opii gr. ij; Antimon. p. tart. gr. $\frac{1}{2}$, was given. Fomentation with hot flannel gave a little relief. The pain was removed by a hip-bath at night; and a draught with Vini Opii mxxx was given.

He passed a restless night; and I found him in the morning (Dec. 6th) lying on his back, with an anxious countenance and a very weak pulse, complaining now of pain extending into the right iliac region. In the afternoon, hiccup came on. During the day, he took some beef-tea and a little wine; and also several small doses of Opium with Spir. etheris nitr. At night, he complained most se-

verely of pain about the pubes. He had not passed any urine during the day; and as the bladder could be felt enlarged, though not distended, I passed a catheter by the urethra, and drew off about two or three ounces of urine. Some warm water was then injected, and withdrawn, slightly tinged with blood: some of it escaping by the wound. A pill (*Opil gr. iij*) was given.

He passed a quiet night, apparently sleeping well. During the next day, he got weaker, and suffered much from hiccup. He was scarcely sensible when I saw him at night; and he died quietly about three o'clock in the morning of the 8th.

The body was examined thirty hours after death. The skin of the lower part of the abdomen, in the hypogastric region, presented an unusual appearance: in fact, it had been observed before he died. It was not the natural colour of the rest of the body, but whiter; it seemed as if the cuticle was dry, and without the common secretion. This appearance extended on the left side into the gluteal region. The peritoneum was more vascular than usual; and in several places the convolutions of small intestines, where they touched, were slightly adherent by recent lymph. The kidneys were in an advanced stage of granular degeneration; in the right, there was scarcely a spot in which the proper structure of the gland could be traced. The bladder was contracted, and much thickened; the mucous membrane seemed healthy. At the fundus, a papilla projected, with a minute opening, in which a small oval calculus was embedded, composed of phosphates, and weighing eight grains, three-quarters of an inch in length, and half an inch in breadth. The wound in the bladder was small, and did not extend beyond the limits of the prostate. Some blood was effused about the base of the bladder, and along the course of the ureters, behind the peritoneum. (244.)

CLINICAL REMARKS. The symptoms of stone in the bladder were well marked in each of the cases. In the first, the parents, who were very poor people, had not regarded them: in fact, the poor boy had not received much care of any kind. His hair swarmed with lice. He had a large opaque patch on the cornea of each eye—the result of old strumous disease; and in the right, the cornea had given way by ulceration, and the iris protruded.

In the man, symptoms still more strongly marked had not been heeded, and more severe suffering had not led him to seek medical advice, till alarmed by his father passing some small stones, one of which, having been impacted in the urethra, was removed by a medical man.

Absorbed as the energies of the honest and hardworking portion of the labouring poor are by the necessity for earning their daily bread, no wonder that in this, as in other disease, the early stages often pass without notice; and that they seldom allow themselves any intermission of their daily labour till disabled by such an amount of bodily suffering as unfits them for earning their week's wages.

In the class of patients who come for treatment at a hospital, it is more common to find stone in boys than in men; in the middle of life, it is comparatively rare. In the last forty years, there have only been, I believe, four cases in the Infirmary beside the present, in which a stone has been found in a man between thirty and forty years of age.

Of the usual constituents of a calculus, lithic acid forms the least painful concretion, and is that most frequently found of a large size in a healthy bladder. Here it had been allowed to grow to an unusually large size.

That stone should often be formed in scrofulous subjects (as all these three patients were), need not surprise us, when we see how widely this kingdom is peopled by a scrofulous race—the descendants of the Saxon invaders.

In cases where a stone exists in the bladder, if it is large enough to cause any suffering—to give rise, in short, to any symptoms for which medical advice is sought—there is seldom any room for doubt about it. Before performing the operation of cutting into the bladder, with the intention of removing it, it is of course desirable to make sure of its existence by feeling it with a metallic sound.

In the second of these cases, the boy was brought from a

distance, for the purpose of having the existence of a stone proved by sounding; and he was to be taken home afterwards. These were not circumstances to be preferred for the performance of such an operation. The other two patients were not sounded till they had been some days in the house.

Although searching the bladder with a metallic rod is not generally thought an operation of a formidable character, it is one requiring more than an average amount of dexterity, and, in an unhealthy subject, it is not by any means free from danger.

The passing of a catheter or a staff, if done with skill, does not give pain; and if it were not for the patient's fear of pain, chloroform need not be given, unless in young children, whose fears are not in general to be controlled by other means, and in whom quietness under a surgical examination is not easily obtained. As the stone was not felt distinctly in the two boys the first time of sounding, a sound was passed a second time. In the Infirmary, they were in the same ward. Partly for this reason, lest either should be frightened by what he saw done to the other, and partly that they might not fear the repetition of the operation, they were both put under the influence of chloroform. The man was not put under chloroform. He was rather of a timid nature; and, on seeing the catheter, cried out hastily that he would rather be cut at once than have such a thing passed. He was calmed by my assuring him that he would not be hurt; and, on feeling the stone, was himself satisfied by the sound of the catheter striking it.

The patient is in the best position for passing an instrument into the bladder when he stands, leaning for support against the wall of the room; and the surgeon sits on a chair before him. In this position, less resistance is found from the contractile structures around the mucous canal of the urethra; and where a stone is free in the bladder, it lies at the base, and is readily struck as the end of the sound passes over it in entering the bladder. It often happens, however, that a patient becomes sick or faint the first time a catheter is passed. This is less likely to happen in the recumbent position. For this reason, and because the operation can be done with less appearance of formal—or formidable—preparation, I generally in a new case like to pass the instrument as the patient lies in bed, with his legs "drawn up" a little toward the pelvis,—the position chosen in each of these cases.

The existence of the stone being clear, the operation of cutting was chosen in all three cases. In boys the operation is not one of much danger. Besides, the cutlers have not yet given us instruments for crushing a stone within the bladder strong enough for the purpose, yet small enough to pass the urethra in boys under puberty. In the man, the size of the stone presented one great objection to an attempt at crushing. But a greater, I think, existed in his peculiarity of constitutional temperament. He was a bad subject for any surgical operation, especially for one which, by the necessity for frequent repetition, calls for so much patient endurance, and so much calmness of disposition, as lithotritry. Lithotomy was, therefore, proposed to him as the best way of getting rid of his enemy. After taking some days to think about it, he agreed to the proposal.

The operation was done—as all operations here are—with the help of chloroform. A question is often asked about the danger of administering this new medicine—whether it is right to give it, or to advise the use of it in any case? In lithotomy, where the actual pain of the operation is not great, and not of very long continuance, there is a sufficient reason for us to give chloroform, when we know that the wish to be free from pain is natural with all sick persons. While people are not hindered from taking their meals by the fear that any mouthful they swallow may choke them, I do not know why a surgeon should be stopped from administering chloroform by the fear that the patient should be choked in trying to breathe it, or be poisoned by its effects afterwards. I do not know any morbid state of the heart, the lungs, or the system in

general, which should constitute a valid objection to the use of chloroform in an operation which is advisable in such a state of health. More care may be needed in one subject than in another; but this may be said of almost every medicinal agent powerful enough to be worth anything.

The "accidents", as they are called, which have happened now and then, have arisen, in many cases, I think,—I hardly like to utter my fears—from some want of care in the person giving it. If the administration of it is intrusted to you, take care that your attention, while students, and hereafter as practitioners, of surgery, does not wander from the patient's chest, and your finger from his pulse, to the more interesting features of the case, lest you smother the patient with the napkin on which you dropped some small dose of the drug. Remember, such a death must not be set down to the chloroform which was at first put on the napkin.

The staff having been introduced, the hands and feet bound together in the usual manner, and the patient brought under the influence of chloroform, the lateral operation was performed.

If the surgeon could rely on his assistants to keep the patient's thighs properly abducted and flexed on the abdomen, so as to expose the perineum sufficiently, he might with advantage dispense with the customary formality of binding the hands and feet together—a proceeding to which it may be objected that the forced position of the hand, and the garter round the wrist, hinder the assistant giving chloroform from feeling the pulse, and that the patient, when brought under chloroform, often loses his hold of his feet and slips from the exact position in which he was at first placed on the table, thus causing the operator to pause before completing the incision into the bladder. To put the garters on well requires a good deal of care.

It is also of importance that the staff should be held properly. When it has been passed into the bladder, and the stone felt with it, when the garters are safely bound, and the patient under the influence of chloroform—you may stand at his right side or his left—if the staff is entrusted to your care, hold it firmly by the handle, and take care that the beak is in the bladder.

In the boys the operation was done with the knife I have generally used—a scalpel with the back rather straighter than the one known among cutlers as "Key's knife." In the man, after opening the urethra with this scalpel, the incision into the bladder was completed with another having a blunt beak at the point. I did not wish to run the risk of doing harm by thrusting a sharp-pointed knife into the bladder through so deep a perineum. In the second boy, the rectum was wounded by the knife slipping from the staff after the urethra was opened. When such an accident happens, if the opening in the gut is not large, and if no other mischief is done, the wound generally heals well. Some urine finding its way into the rectum may irritate the mucous membrane (in this case it may have increased the tendency to diarrhoea); and faecal matter passing through the wound may perhaps delay the healing. No other inconvenience was felt here.

In the man it might be said, as far as the mere operation is concerned, that it was successful. The stone was removed without any mishap, and he did not suffer any "shock" from the immediate effects of it. Yet after the first twenty-four hours it seemed pretty clear that he would sink.

The old surgeons on visiting a patient after the operation of lithotomy, were in the habit of asking, "Does he wet well?" Their attention was directed to the secretion from the kidneys as one of the most important signs of a successful event. This man did not "wet well." Very little urine was secreted after the first twelve or fourteen hours—a clear indication that whatever inflammatory action was in progress in the kidneys was increased. In such a state of disease, any surgical operation—especially on the urinary organs—is attended with great danger; a low form of erysipelatous inflammation, with peritonitis (of which an early stage was seen here), is particularly to be

feared. It is not unlikely that the continued and increasing discomfort produced by this state of kidneys was (as much as the calculus) one great cause of his at length seeking advice; and much of his irritable temperament may have been dependent on such a state of health.

If the kidneys had been sound, would the man have recovered? The question is suggested by the examination of the body. The small calculus encysted in the bladder would not have hindered recovery; though it might have rendered another operation necessary at a future time. The question arises from the appearance of the cellular tissue—the modern areolar and adipose tissues—about the bladder, behind the peritoneum. The short time snatched for the examination, and the way it was of necessity made, hindered us from making such a dissection of the perineum as would have shown whether that most important structure, the deep fascia of the pelvis, was opened. It was not wounded by the knife, but probably it was torn in drawing the stone through the prostate; thus allowing the effusion of blood, and possibly urine also, to pass freely into the surrounding cellular tissue. Profuse suppuration would be the certain result, and, perhaps, fatal peritonitis.

It may, I think, be fairly doubted whether so large a stone, even if happily seized lengthwise, in its smallest diameter—that diameter being increased by the thickness of the blades of forceps powerful enough to hold the stone in its chops—could be drawn through the prostate without tearing open the deep pelvic fascia.

You will not pass through life without having frequent occasion to administer chloroform, to pass a catheter, or to sound a patient; and you may be called upon to assist at the operation of lithotomy, to bind the garters, or to hold the staff. To these necessary adjuncts, therefore, requiring abundant surgical skill, you should direct attention, rather than to the difficulties of the mere operation itself of lithotomy, which, in all likelihood, few of you will ever be called on to perform. The after-treatment of this, as of other great operations, may be left to you; and to that you must give attention in the wards.

WORCESTER GENERAL INFIRMARY.

CASES OF FATAL OBSTRUCTION OF THE BOWEL BY CANCEROUS DEPOSIT.

Under the care of J. MALDEN, M.D., and H. D. CARDEN, Esq.

[Reported by ERLIN CLARKE, M.B., House-Surgeon.]

CASE I. Elizabeth Philips, aged 76, was admitted under the care of Mr. Carden, Jan. 12th, 1856. She was exceedingly emaciated, and her countenance had the peculiar appearance associated with malignant disease. She applied for advice in consequence of a painful tumour situated in the epigastrium, which she said had existed for some years, but had not been troublesome till about ten months ago. On examination, it was found to be of the size of a small orange, moveable, and apparently situated in the subcutaneous cellular tissue. The skin over its apex was adherent, much thinned and congested, but the tumour itself was firm and elastic. Other similar tumours were found in various parts of the trunk, in a less advanced stage, some of them no larger than small peas; the mammae were shrivelled, but healthy in appearance, and there was no evidence of disease in any of the lymphatic glands. The abdomen was prominent, and its walls somewhat tense, the intestines containing a good deal of flatus; she said that for some weeks her bowels had been more or less constipated, and that she had occasional attacks of pain in the abdomen. A dose of castor oil procured a small stool.

Jan. 14th. Tympanitic state of abdomen increased, but the bowels have acted very slightly.

Jan. 16th. Vomiting of the contents of the stomach has come on, and the abdominal distension is now very great; she does not complain of pain, nor is the abdomen tender; cathartics, and subsequently enemata with opiates, failed