A CASE
OF
LARGE PELVIC HYDATID
SUCCESSFULLY TREATED BY PERINEAL
INCISION AND DRAINAGE
WITH OBSERVATIONS

BY
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THE following case presents some points of interest in connection more particularly with the treatment of pelvic hydatids in the male.

A well-developed man, æt. 45, and above the average stature, came under my observation, at the suggestion of Dr. G. B. Batten, in 1893, with the following history:—He had always enjoyed good health until the commencement of the present illness. In March, 1885, when resident in Australia, where he had been engaged in business for some years, he suffered from retention of urine for the first time in his life. This occurred without the usual history of a urethral stricture, and apparently without any obvious cause. A silver catheter was introduced with

difficulty and pain. It was retained for some hours and then withdrawn, considerably bent, as no urine escaped by it. After the catheter was removed, micturition was spontaneously performed, but with much interruption.

Commencing in this way the subsequent symptoms of the patient's long and continued illness may be briefly stated as those of loss of power lasting for some weeks in the left leg, and the greatest difficulty in voiding both urine and fæces. The pain and distress in this way occasioned quite unfitted him for business pursuits, and gradually led him into the habit of daily taking very large quantities of morphia. His symptoms resisting all kinds of treatment, he returned to England in 1893, being advised before he left the colony to have his colon opened, to relieve the suffering that his constantly-obstructed bowels occasioned.

On his arrival in this country Dr. Batten, in sending the patient to me, wrote "that the pelvis was occupied by a large rounded swelling, which squeezed the rectum flat, and seemed to be a cystic tumour with thick walls," adding that he thought "something besides colotomy might be done to relieve the patient, and enable him to pass water and motions without the frightful agony which he suffers."

On examination, I found the abdomen partially occupied by a tumour, about as large as a fully-developed gravid uterus, situated rather to the left of the median line, and evidently springing from within the area of the pelvis. It was extremely tense though uniform to the touch. On exploring with the finger in the rectum, which was a painful process, the prostate was obscured by a firm tumour, which, as already stated, completely compressed the bowel. On introducing a silver catheter into the urethra, it was found impossible to carry it further than the prostate, but on substituting a long and very flexible instrument, the bladder was easily entered. It was obvious that the latter was pressed over towards the right side, so as to form a tolerably sharp angle with

the deep urethra. It was also apparent that there was no stricture in the ordinary acceptation of the term. The urine was scanty and high-coloured but otherwise healthy. As the patient stated that his fæces at times presented not only a flattened appearance, but were mixed with some viscid or gum-like material, they were carefully examined, with the result that the characteristic hooklets of hydatids were readily discovered. This recognition placed the precise diagnosis as to the nature of the cyst beyond all doubt. The great and prolonged difficulty under which both urine and fæces had been voided, taken in conjunction with the physical state of the abdomen, rendered it probable that not only were the intestines largely distended and impacted, but that the ureters and kidneys were in a similar condition. In fact, on the right side what I believe was a hydronephrotic kidney could be felt. The conclusion arrived at was that the distension was caused by an hydatid cyst, situated between the rectum and the bladder and below the reflection of the peritoneum which forms the recto-vesical pouch.

The patient remained under observation for some time, but was not at first disposed to submit to any operation; his symptoms, however, increasing, if possible, in intensity, he expressed himself as willing to acquiesce in whatever was advised. Mr. Arthur Durham kindly saw the patient in consultation with Mr. Rand (Dr. Batten's partner) and myself, and concurred in the diagnosis that had been arrived at. The nature of the treatment to be employed was very carefully and fully considered, and relative to such measures as had been previously adopted in apparently similar cases. It was decided to open the cyst from the perineum, and to drain from this position. This conclusion was arrived at partly for the reason that it seemed somewhat hazardous to open a cyst which clearly had some slight connection with the intestinal track by any form of abdominal section, where the viscera generally were in a state of extreme distension and im-

paction, and partly because, from the long existence and size of the tumour, it appeared desirable to secure the evisceration and drainage of the cyst at its most dependent point.

The patient, on being anæsthetised, was placed in the ordinary perineal lithotomy position. To indicate the line of the urethra a flexible bougie was passed and retained in the bladder, as, for the reason already stated, a metal instrument would not enter. In order to give me sufficient space to manipulate in a somewhat deep perineum, I made the usual external incision as for lateral lithotomy, without, of course, opening either the urethra or rectum. I then made my way carefully with the finger and knife, between the bladder in front and the rectum behind, to the base of the cyst and exposed it. The latter was first punctured with a large trocar and cannula, but as nothing escaped I freely extended the puncture wound with a probe-pointed bistoury and passed my finger within the cyst. The withdrawal of my finger led to the discharge of a large quantity of fluid and innumerable daughter cysts. The odour was most offensive. The clearance of the interior of the cyst was greatly aided by abdominal pressure exercised by Mr. F. Durham, who, in conjunction with his brother, Mr. Rand, and Mr. W. Braine, kindly assisted me during the operation. In this way, and by the use of forceps and a lithotomy scoop, the cyst was cleared of about half a gallon of contents. There was no hæmorrhage, and the operation was completed by washing out the sac as thoroughly as possible and fixing in a large drainage-tube.

The patient suffered a good deal of cramp in both legs after the operation. Large quantities of both urine and fæces were voided, though, as the bowels seemed to have temporarily lost all power, the discharge from the latter was assisted by enemas. In three weeks the patient was able to leave the surgical home and return to his residence, where his treatment was followed up by Mr. Rand and

Dr. Batten. The sac was carefully drained and washed out; and by attention to the carrying out of this the success of the case was insured. In the course of the after-treatment a considerable number of daughter cysts, in various stages of disorganisation, were discharged by the wound.

The operation was not followed by anything remarkable in the temperature chart, or by what has been referred to by some as an "hydatid rash." His long illness, extending over nine years, combined with the habitual use of morphia in large doses, rendered convalescence somewhat protracted. He called to see me four months after the operation, when he was in excellent health, the power both of urination and defæcation having gradually returned. There was an entire absence of any abdominal or pelvic tumefaction.

Two cases, very similar to the one I have narrated, have recently been published by Dr. Sawkins,¹ of Sydney, which I will briefly refer to. The first was that of a man who had retention and overflow of urine, though the bladder was only found, by the catheter as well as by suprapubic aspiration, to contain a little over four ounces of urine. He also had no rectal control. A tumour was detected by examination of the rectum, which was believed to be a greatly enlarged prostate. The patient further complained of inability to walk and pain along the course of the left sciatic nerve. He gradually sank, and died without operative treatment. An autopsy showed the existence of a large hydatid cyst filling up the pelvis, and pressing on the urethra and bowel. It was attached in front to the base of the bladder, which it invaginated, and behind to the cavity of the sacrum and wall of the rectum. The cyst itself was loosely adherent to the bladder, being directly in contact with the muscular layer. It was covered on its upper surface by the peritoneum of the recto-vesical pouch. There were numerous small cysts attached to pelvic viscera, and in the liver and omentum.

¹ 'The Australasian Medical Gazette,' November, 1893.

In the second case recorded by Dr. Sawkins, in a man aged thirty-nine, the early history was that of retention of urine without previous evidence either of gonorrhœa or stricture. Examination by the rectum gave similar signs of a large cystic pelvic tumour, which, by an exploring needle, was demonstrated to be an hydatid. A suprapubic exploration was made, but as it was found impossible to reach the cyst, the incision was prolonged upwards, and the peritoneum opened. The contents of the sac and the endocyst having been removed, the opening into the envelope was stitched to the abdominal walls, and a drainage-tube inserted. The patient made an uninterrupted recovery in thirty-eight days.

Commenting upon the mode in which these tumours originate in this particular position, Dr. Sawkins, on the authority of the late Dr. Fagge,¹ states that they arise from the growth of an embryo, which has fallen by its own weight into the pelvic cavity after perforating the walls of the stomach. This explanation was also advanced by Dr. John Hunter,² who, it is interesting here to note, described the dissection of a case where, in a man, a pelvic hydatid proved fatal by causing retention of urine from pressure on the neck of the bladder.

Mr. Targett, however, in his lectures at the Royal College of Surgeons,³ takes a different view as to the origin of these tumours, which, Dr. Sawkins states, one of his cases substantiates. Mr. Targett observes: "An examination of all the specimens in the London museums has shown that these cysts were originally placed between the muscular coat and the sheath of recto-vesical fascia. This fascia, besides enclosing the prostate and lower part of the bladder, forms a special sheath for the vesiculæ and vasa deferentia; hence the gradual enlargement of the cyst separates the fascia from the bladder, and thus detaches

¹ 'Principles and Practice of Medicine,' 1st edit., vol. ii.

² 'Transactions of a Society for the Improvement of Medical and Surgical Knowledge,' vol. i, London, 1793.

³ 'Brit. Med. Journ.,' July 29th, 1893.

the vasa and vesiculæ, which henceforth may become incorporated in the wall of the cyst." Consequently, we can no longer regard these cysts as formed within the peritoneal cavity, but as deposited from the large venous plexuses about the base of the bladder, or by the burrowing of the embryo through the mucous and muscular coats. Most of these cysts are of secondary origin, some being furnished by the liver, whilst others, descending from the kidney along the urinary tract, make their way into the cellular intervals in relation with the most dependent portion of the bladder wall. Some of these points are displayed in specimens which I have brought from the Museum of the Royal College of Surgeons.

I will now briefly refer to recorded cases bearing upon the treatment these retro-vesical hydatids have received. In the first place it is not unlikely that a natural cure has on some occasions taken place by the discharge of the contents of the cyst into the intestinal canal, and their escape in this way. In fact, Dr. Hunter, in the case I have referred to, and in the days before abdominal surgery was developed, observes: "When the presence of hydatids is suspected, it would appear to be of great consequence to procure them an outlet; but it must be obvious that, being generally seated in the abdomen, that business must be left entirely to nature." This probably happened, but to a very limited extent, in the instance I have narrated, as hooklets were found mixed with the fæces. The operative proceedings which have been adopted in this class of cases seem to have been of four kinds at least.

(1) Laparotomy, and the opening and draining of the hydatid sac, by attaching the latter to the abdominal parietes. This has already been illustrated in the case recorded by Dr. Sawkins.

(2) By puncture of the cyst through the rectum. Dr. Fairbank¹ records a successful case of this kind. The patient was seen ten years afterwards in good health and

¹ 'Trans. Clin. Soc.,' vol. xxiii.

without recurrence. Tapping or aspirating an hydatid, though a simple operation, is by no means free from risk. Instances of a fatal and rapid form of septicæmia, which at one time led to the impression that under certain circumstances the hydatid fluid was of a poisonous nature, are not uncommon. This danger connected with simple paracentesis is frequently referred to in Australian literature.

(3) By a perineal operation. Mr. Bryant¹ has recorded an instance of a man aged fifty, where the circumstances connected with a pelvic hydatid were not very unlike the case which forms the basis of this paper. The symptoms of both retained urine as well as fæces were pressing and serious, and were evidently associated with a very large pelvic cyst. Puncture from the rectum in three different directions failing to give the necessary relief, Mr. Bryant cut down upon the tumour from the perineum. The cyst was exposed and opened in this way, and, to give more space for the withdrawal of the contents of the sac, the incision was carried backwards into the rectum. In this way upwards of three quarts of hydatid cyst were evacuated. Though the operation was successful in affording relief, granular disease of the kidneys proved fatal on the ninth day after the operation. It seems little short of a miracle that I had not also this serious complication to contend with in my patient's case, after his nine years' severe suffering from obstructed micturition. Fortunately, I believe the kidneys were uninvolved further than, in conjunction with the ureters, having undergone some ascending dilatation.

(4) Mr. Bond,² of Leicester, has advocated the opening of these cysts (I presume from whatever position they are most accessible), the withdrawal of the endocyst, and the immediate closure of the envelope without resorting to continuous drainage. Still more recently he has further illustrated the success of this practice. Though it is a method of treatment which has been referred to by Dr.

¹ 'Trans. Path. Soc.,' vol. xvii.

² 'Brit. Med. Journ.,' April 11th, 1891, and January 26th, 1895.

William Gardner, of Melbourne,¹ who has had a large experience in these cases, as the "ideal method for living cysts of the kidney," I hardly think it would have been applicable in the case I have narrated. The large extent and probable ramifications of the sac, its connection with the intestinal track, and the subsequent discharge of embryonic hydatids, in spite of the free irrigation, scraping, and cleaning that was practised at the time of the operation, all tend to indicate that continuous drainage was a necessary part of the proceeding. In the case of hepatic hydatids Mr. Bond's practice seems to have been most successful.

In conclusion, it appears to me, having regard to the nature, extent, and attachments of these pelvic parasites, as well as to the urgent and serious manner in which they obstruct both the discharge of urine and fæces, that the perineal method of dealing with them, followed by drainage, has much to recommend it. Even supposing, as it sometimes happens, that these cases are not confined to a single or bilobed pelvic cyst, but are complicated with others of visceral connection—as from the liver, the omentum, or elsewhere—the disposal of the pelvic cyst in the manner I have advocated would tend to remove the chief sources of difficulty to be apprehended in subsequently proceeding with a laparotomy, should further abdominal developments render this necessary.

¹ 'Australian Med. Journ.,' August, 1894; and 'Intercolonial Quarterly Journ.,' August, 1894.

(For report of the discussion on this paper, see 'Proceedings of the Royal Medical and Chirurgical Society,' New Series, vol. vii, p. 126.)