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CASE
OF
AQUEOUS ENCYSTED TUMOUR
OF THE
KIDNEY,
WITH A SUPERNUMERARY GLAND ATTACHED TO IT.

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IN a paper which I presented to the notice of the Society, in the early part of this season, I gave an account of some cases of tumours connected with the liver, which I called *aqueous encysted tumours* of that organ; and among other peculiarities of this disease, I mentioned the nature of the fluid which they contain, which is water only without any albumen or other animal matter, except a little of what Dr. Marcet has called *mucro-extractive matter*. In speaking of the impropriety of the term *serous cyst*, as applied to these tumours, I observed that I had punctured a tumour apparently connected with the kidney, which I believed to be an instance of an

aqueous encysted tumour of that organ, because the fluid which was evacuated was of the same kind as that which these tumours usually contain. An opportunity has since been afforded of verifying this observation by the death of the patient; and as the growth of the aqueous encysted tumour of the kidney to such a size as to constitute a disease, perceptible during life, is, as far as I know, still more rare than the same disease in the liver, the relation of this case may, perhaps, not be uninteresting to the Society, as a sequel to my former paper, the contents of which appeared to be new to many of the members.

John Connell, æt. 6, was admitted October 18th, 1832, into St. George's Hospital under the care of Dr. Seymour, with enlargement of the abdomen, and shortly afterwards his mother having given an obscure account of his having received some injury, I was desired to see him.

It appeared from the mother's account, and from a letter written by the medical man who had first seen him after the injury, that three weeks before his admission he had been struck down, and perhaps run over by a carriage, which produced great pain in the abdomen, with considerable swelling, in consequence, as this gentleman supposed, of inflammation of the colon;—that the swelling had almost all subsided four or five days afterwards, when the bowels had, with great difficulty, been acted upon, and that ten

days after the injury a swelling again slowly appeared without much pain, but which was now confined to the right side of the abdomen instead of having been general; and that having been previously a stout healthy child, he had since that time become emaciated, and had suffered from feverishness, with occasional pain in the tumour.

The whole abdomen seemed large and distended, but especially the right side, which was tense and firm, and occupied by a tumour which extended from the right hypochondrium to the right iliac region, and from the back of the loins to a little beyond the linea alba, the ribs and ensiform cartilage being considerably pushed upwards by the bulk of the swelling. The intestines were pushed across to the left side, or covered by the tumour, for no sound of air could be detected below the swelling, though it seemed as if deep pressure enabled the edge of the liver to be felt by the finger. The tumour evidently contained fluid, fluctuation being clearly felt by the fungus being placed laterally, but more obscurely, from above downwards, and it seemed as if the fluid was divided into two portions by a line running obliquely across the abdomen, just below the umbilicus.

The tumour did not seem to be very painful, but the child complained of pain occasionally, and pressure gave some pain at the lower part of the abdomen.

The child did not suffer from much fever, but the

pulse was rather quick and feeble, and the tongue white. The bowels were constipated, requiring the frequent use of castor oil, and the evacuations were light coloured. The urine was passed freely, but was rather scanty in quantity, and was healthy in quality.

What then was the nature of this tumour? Was it an abscess in the iliac fossa and among the abdominal muscles, produced by the blow? This did not appear probable to me from the absence of perspiration and of rigors, the slight pain and tenderness, and the symptoms of *irritation*, rather than of *fever*, which were present in the case.

Was it a deposition of serum and lymph, or of pus in the peritoneum, in consequence of the inflammation supposed by his first medical attendant to have taken place in the colon? This is not indeed a very common circumstance, but yet on the whole, after hearing the opinions of our colleagues and of many other gentlemen who saw the case, it seemed to Dr. Seymour and myself to be the most probable cause of the swelling. What seemed to make this opinion likely was the abrupt line, which was felt where the tumour and the intestines on the left side joined, and the crackling sensation which was there felt, as if by the deposit of lymph at the margin of the cavity.

The child was directed to take castor oil every other morning, to take one grain of calomel three

times in the day, and to have ten leeches applied to the swelling, with fomentations.

Nov. 7th, about three weeks after his admission, the irritation of the system had much subsided, and all pain and tenderness had ceased, and the boundary line of the cavity seemed to be nearer to the right side, as if the fluid had diminished, and it seemed now to be in one cavity, the apparent division being no longer perceptible. A better diet was allowed, but the calomel was continued, with the castor oil.

13th.—Some pain being felt, eight leeches were repeated, and the calomel, with four grains of Dover's powder, was given twice a day, instead of three times.

22d.—Leeches repeated in consequence of pain, and beef tea given instead of meat.

By this time the swelling had much diminished, so that the boundary was felt about half an inch to the right of the umbilicus, instead of going beyond it, and the tension was lessened. The health had by this time much improved, the bowels were more regular, the appetite good, and the child was cheerful and free from pain or anxiety.

24th.—The calomel was omitted, and the abdomen was ordered to be rubbed with an ointment

composed of equal parts of mercurial and iodine ointments.

Very soon after this a marked change for the worse took place, fever returned Nov. 28th, with sickness, for which effervescing saline mixture was directed.

December 1. Great pain and tenderness of the whole abdomen came on, as if there was general peritonitis, and the fluid in the tumour rapidly increased again, and it became very tense and painful. The child lay with his legs drawn up, and was unable to bear them to be laid down, and the countenance assumed an expression of great suffering, with slight inflammatory fever.

Twelve leeches were applied in the morning, and again in the evening, and in the middle of the day I made a small puncture into the tumour on the right side through the abdominal muscles, and let out 18 oz. of clear fluid nearly transparent, which evaporated almost entirely, leaving a small residuum of muco-extractive matter, without any trace of albumen. The evacuation of this fluid afforded very great relief, but our views of the nature of the disease were materially changed.

It seemed evident upon consideration of the nature of the fluid, that it had not been formed by the peritoneum, but was contained *in a cyst*, for the reasons

mentioned in my former paper, when I alluded to this case.

Was it then an *aqueous encysted tumour* of the liver, such as I was then speaking of?—Or was it an aqueous encysted tumour of the kidney?—Or was the fluid contained in a cyst connected with fungus hæmatodes of the kidney?

This latter opinion became in a short time the general one, for it seemed as if after the evacuation of the fluid, a solid tumour could be felt in the loins, which indeed was subsequently found to be the right kidney though not enlarged, as it appeared to be from its having become more moveable, and the countenance soon put on that sallow and emaciated appearance, which so often attends malignant disease; and besides, fungus hæmatodes of the kidney is more common than the aqueous encysted tumour of the kidney or liver, enlarged to such a size as to produce the symptoms observed in this case.—The urine was indeed healthy for the most part in its quality, but so it often is in fungus hæmatodes of the kidney, till the tumour softens, and discharges blood, or pus, or the nature of the secreted fluid is otherwise altered. We had observed, however, an unusual scarcity of urine at the first inspection of the case, which was not noticed during the temporary amendment of the patient, but was now again remarked; and several times before the child's death I observed that the urine contained a considerable quantity of sulphuretted

hydrogen, which tarnished silver, and was evident to the smell, though the urine was clear, and sufficiently acid, to be considered in other respects healthy.

Adopting this view of the case, as the most probable, the fluid was not again evacuated, which I now much regret, as it might have afforded some relief to the boy, though it is not likely to have saved his life.

The amendment, however, occasioned by the evacuation was so temporary, that it did not seem to be again called for, especially after the supposed existence of solid tumour. The pain soon returned, the child rapidly fell away, in a week the swelling was as large as before the operation, extreme restlessness took place, with starting and screaming in his sleep; convulsions were once observed, and the child could not bear to be touched or looked at. The tumour went on increasing to a great degree, and the child lingered in a state of great suffering till Dec. 25th, when he died.

On examination after death the tumour was found to consist of a single cyst, containing about five pints of fluid, the greater part of which was clear and transparent, like that which had been previously evacuated, and, like it, did not coagulate at all on the application of heat; the remainder contained a good deal of the white semi-purulent matter which is usually seen in serous membranes, or in cysts, which have been inflamed. The cyst was tolerably firm in

front, but towards the back and inner part it was so thin and soft, as to tear with facility, and scarcely to allow of being dissected out. The cyst had protruded slightly below Poupart's ligament through the femoral ring, and reached upwards to the liver, raising the ribs, and pushing the liver towards the left side and into the chest; the other viscera were pushed to the left side of the abdomen, and the cyst was on that side covered by the peritoneum belonging to the colon;—in front it was adherent to the inner surface of the abdominal muscles, and behind to the iliacus internus and psoas muscles, and to the side of the lumbar vertebræ, where it was thinnest. It thus occupied the whole of the right half of the abdomen and iliac fossa, and encroached a little upon the pelvis, being external to the peritoneum.

On the inside and towards the fore part of the cyst was seen the ureter, which was traced upwards between the layers of which the cyst was contained, towards the right kidney, which was situated at the back part of the cyst towards its upper and inner part. The ureter was tortuous and elongated, so as to make it difficult to trace its course, but it entered the kidney in the usual way, and was of its common size, and had no communication with the cyst; but there were two small orifices in the pelvis of the kidney, which seemed to have been the result of ulceration, and near these orifices the ureter and pelvis of the kidney were of a black colour, and tarnished the probe, as sulphuretted hydrogen does. The kidney was of the

usual size, and healthy, and its anterior surface formed as it were a part of the cyst, as the cyst was intimately connected with the margins of the organ, and could not be traced over its surface; and the surface of the kidney, which was thus seen in the interior of the cyst, was flattened, and rough, and the covering thicker than usual. About five inches from the kidney towards the inner part of the cyst, was a small body, about the size of a walnut, which projected into the cyst, and was soft and lacerable, and covered by a very thin coat; this body proved on examination to be a *third kidney*, consisting of a single lobe, with the cortical and tubular part perfect, and having a single mammillary process, and calyx, but no excretory duct could be traced.

All the other viscera were healthy.

Such then was the appearance of this curious cyst, and the question presents itself, what was its first formation?

1st. It was conjectured that it might be a cyst formed by laceration of the kidney in consequence of the blow, the smaller body being the lacerated portion separated from the rest of the organ by the growth of a cavity containing urine.

The small kidney was, however, too perfect, and the original one too smooth and uniform in its shape and size, and in its external and internal structure to allow

of this supposition. The small body was in fact a third kidney, such as is sometimes found, and perhaps secreted urine, which was carried off by a duct which escaped our observation, or was destroyed by the growth of the cyst. It exactly corresponded with the general form of these supernumerary kidneys.—Geoffroy de St. Hilaire says, “Les reins surnuméraires n’ etaient evidenment que *des lobules* des reins normaux, restes distinct de la masses de ces organes. En un mot il y avait scission, et non multiplication des reins.”

2ndly. The nature of the fluid served also to shew that the cyst could not have been formed by laceration of the right kidney by accident, nor yet by the gradual accumulation of urine secreted by the separate lobule in consequence of its having no excretory duct. The fluid was not urinous at all, either when drawn off during life or collected in still larger quantity before death, and (with the addition of the result of inflammatory action) its nature was the same after death, as when I let it out during life. It had indeed after death a strong animal smell, which induced some gentlemen to suppose that it at least contained some urine, but the urine in the bladder was very different in its nature, and was healthy and clear, and free from any admixture with the purulent secretion of the cyst; the fluid in the cyst was also alkaline, and ammonial; the urine was acid.

To be certain with regard to the nature of the

fluid, I requested Dr. Prout to examine some of it, comparing it with the urine of the bladder, and he was kind enough to send me the following result of his analysis.

DEAR SIR,

The fluid from the cyst is *serous*, and after a careful examination, I have not succeeded in detecting anything urinary in it ; at least, if it contains urine, the quantity, I am satisfied, must be very minute.

Yours truly,

W. PROUT.

Sackville Street, 30 Dec.

This analysis will serve to show not only that the contents of the cyst were not urinary in their origin, but also that the small communication before alluded to between the pelvis of the kidney and the cyst, had not allowed any urine to pass into the cyst, but that the orifice was more probably the result of ulceration induced by the pressure of the cyst, in order to allow of the escape of some of the fluid into the nearest tube.

3dly. I am induced, therefore, on the whole, to have little doubt that the cyst was an *aqueous encysted tumour* of the kidney, similar to those which I have described as enlarging so greatly in the liver. It is curious, indeed, that while I was enabled to mention to the Society a great number of cases of this kind in the liver, besides those which I had myself seen, I have

not met with one satisfactory case on record of the same disease in the kidney, although almost every one must have seen these cysts in this organ, when of small size, and unsuspected during life, from their having caused no symptoms of disease. Even Morgagni has only, I believe, an account of one such cyst, and that contained a few ounces of fluid only, and had not been detected during the life of the patient.—There are, indeed, many accounts of what are called curious cases of cysts connected with the kidney, but some of these were instances of mere distension of the coats of the kidney, and of the excretory vessels, with which every one is familiar, and some of them are actually ovarian tumours, erroneously supposed to have originated in the kidney*.

But although I am acquainted with no history like the one I have related, these cysts must not unfrequently enlarge to a considerable size. In the collection, for instance, of the College of Surgeons, are several tumours of the kind connected with the kidney, which have precisely the same appearance, as in that which I have detailed to the Society. They are connected in the same way with the convex part of the organ, which is flattened, and its coats condensed in a similar manner. They are, for the most part small, from the size of a pea or nut, to a size sufficient to hold several ounces, and one appears to have been large enough to have held two

* See *Miscell. Acad. Nat. Curios.* Dec. 1. Ann. 1. 1670. p. 133. *Novi Comment. Gotting.* T. 8. p. 10. *Bulletins de l'Ecole de Medicine* Ann. 1811. p. 185, &c. &c.

pints, and it seems to have been originally formed of two cysts, by an imperfect division being still seen in the interior of the cyst. Unfortunately, however, no account of the case has been preserved.

These *aqueous encysted tumours* of the kidney are called in the Catalogue of the Museum of the College by the same name which was given by Mr. Hunter to the similar cyst in the liver, viz. *spurious hydatids*. I need not repeat my objection to the term, as I dare say many of my hearers are acquainted with the more common characters of *hydatid tumours* of the kidney, these animals being not unfrequently discharged with the urine in vast numbers, and for a great length of time, and the disease being sometimes entirely cured, so that although I have seen the disease occasionally during the life-time of the patient, I do not recollect having been present at one dissection of the disease.

It will be observed also from the preceding history how exactly the *aqueous encysted tumour* of the kidney corresponds with the same tumour in the liver;—it has the same origin from a blow;—there is a similar rapid growth in the cyst;—the fluid has precisely the same appearance, and chemical character;—and finally there is the same acute suffering from distension and pressure, before the patient's death, and the same termination in inflammation, and inflammatory secretions, which were before pointed out to the notice of the Society in the Aqueous Encysted Tumours of the Liver.