A CASE
OF
LARGE SOLID TUMOUR
REMOVED WITH SUCCESS FROM THE RETRO-PERITONEAL
SPACE
BY
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A widow aged 50 was admitted into St. George's Hospital under my care on September 15th, 1896, being recommended to me for treatment by Dr. Gould May. Menstruation had ceased twelve months ago. She had had two children and no miscarriages. The uterus had been completely prolapsed for twelve months, and before then the woman had difficulty with micturition, the prolapse gradually getting worse. For four months she had noticed a large abdominal swelling, which had slowly increased. On examination a tumour of considerable size fills the abdominal cavity, being more pronounced in outline towards the left flank, and reaching above nearly to the ensiform cartilage. There is a well-marked area of resonance round it, and it is quite dull in front. Below, it seems to pass into the pelvis. The growth feels

elastic and semi-fluctuating, but there is no distinct thrill or percussion wave. No doubt was felt that it was fluid in consistence, and I even had suspicions it might be an excessively distended bladder. The uterus was completely prolapsed, and when it was reduced, with some difficulty a catheter could be passed into the bladder, evacuating that organ, without any effect upon the size of the abdominal tumour. The opinions expressed were in favour of the growth being ovarian in origin.

On September 22nd the operation was performed. In making the usual incision it was at once noted that something unusual was going to present, in the number of fibrous laminæ containing large and branching veins, which needed division, and the ordinary peritoneal investment was not recognised. After dividing many layers, the surface of the tumour, white and glistening exactly like fat, was exposed. It was found universally adherent to its capsule. An incision was made into the growth, under the idea it was cystic. It was then found for the first time that the tumour was a soft solid, and very deeply and firmly seated. Free hæmorrhage was taking place from the incision, and seeing the hopeless prospects for the patient if the wound was closed and the operation abandoned, I determined to remove the growth at all hazards. As the tumour did not present a malignant aspect, but rather resembled a lipoma, I at once prolonged the incision upwards nearly to the ensiform cartilage, and here some coils of intestine, including the transverse colon, were lying quite flattened in front of the tumour and adherent to its thick capsule. The arrangement of parts was very confused; there were numerous laminæ of thick membranes, and I was careful to work absolutely upon the surface of the tumour. This was effected by careful peeling away of the deepest fibrous laminæ. On either side the same difficulty was experienced, some intestine and apparently flattened-out mesentery lying in front of the tumour. At length I was able to get my hand

behind the fundus of the growth and raise it from the spine. It separated readily from the aorta and vena cava. Moreover some lobes and lobules became apparent, and these shelled out with ease from the tissue on either side of the spine, giving me the assurance that the tumour was innocent in nature, and affording great encouragement to proceed.

The mass was now delivered and supported by an assistant, and separation of the bladder was proceeded with. A free transverse incision was made with a scalpel across the front of the tumour, and the bladder readily peeled away with a lamina of tumour capsule adherent behind it. A number of dense adhesions, containing very large vessels, connected the growth with the tissue about the front of the lumbar spine and brim of the pelvis. These were secured by transfixing and careful tying with strong silk. The condition of the patient now became serious, and six or eight thick adhesions were rapidly secured and divided, and the tumour removed. Hot water flushing at once restored the pulse and colour of the patient. No loss of time was allowed to intervene before the wound was closed, a tube being introduced below. The operation lasted forty minutes, and its later stages were performed with all possible rapidity.

The tumour in the fresh state was exceedingly soft and elastic, white and wax-like in colour. It contained a great amount of serum, which drained from it in quantities. After soaking a few days in spirits it weighed nearly nine pounds, and shrank considerably; in the fresh state it must have weighed much more. My colleague, Dr. Rolleston, pronounced the growth to be a soft fibroma, containing unstriped muscle, so that the structure resembled that of a uterine fibro-myoma, but very soft and oedematous.

The patient suffered from severe collapse after the operation, and was only kept alive by careful rectal feeding and small quantities of champagne by the mouth.

Several ounces of blood-stained fluid were drawn through the tube, which was removed on the second day. On the fourth day, as the abdomen was distended, the bowels were moved by salines and assafœtida enemata. After the bowels acted her case ceased to give any anxiety. A small sero-sanguineous collection formed at the lower part of the wound on the fourteenth day; this was evacuated and washed out, and the sinus soon closed. The sutures were removed, and the abdominal wound proved soundly healed by the end of the third week. Great care and attention was devoted to the after treatment of this case by Mr. Blackett, then house surgeon, and I wish to acknowledge his valuable services in this respect.

The complete prolapse of the uterus in this case put out of consideration the probability of a large abdominal tumour being of a uterine origin, and I was much surprised at the report of the microscopical examination. The growth may originally have been a uterine fibroid, which had become attached superiorly, and detached from the uterus as the latter descended out of the pelvis. A striking feature was the extraordinary number of adventitious adhesions. The tumour seemed to receive blood-supply from every membrane it lay in contact with. The anterior and lateral adhesions were readily broken down by firm sweeps with the fingers, but sometimes they bled and oozed alarmingly. It is, of course, possible that this tumour, though a fibro-myoma, may have originated apart from the uterus. Such a question is most difficult to settle, but tissue containing unstriped muscle is known to exist in the broad ligaments about the brim of the pelvis behind the peritoneum as high as the renal capsule. The comparatively rapid growth is in favour of this view.

The mesentery seemed to have been entirely displaced by pressure behind. Traces of it were plainly to be seen in front of the tumour, and some of the many vascular adhesions separated behind may have contained mesenteric vessels, but the parts were too confused to

admit of certainty, and the patient too ill to allow of prolonged investigation.

The exact position of the tumour in the present instance is most difficult to define, for the anatomical distribution of the parts was so confused, that had I waited to be clear where I was working, the tumour would probably have never been removed. The presence of flattened-out intestine and mesentery in front of this growth, and the many membranous structures which had to be divided before the real tumour substance was exposed, made me believe that the main bulk of the growth at any rate was behind the peritoneum. The aorta and vena cava were also plainly to be felt on shelling the mass away posteriorly. I am not at all ready to explain how this remarkable growth reached the position it occupied if primarily uterine, but I only state the facts undoubtedly observed.

The adhesion of the transverse colon and some coils of small intestine to the front of the tumour was very close. Indeed, the colon might readily have been cut across unless the tissues in enlarging the wound had been cautiously divided. The main proceeding which enabled this operation to be completed without disaster and in a reasonably short space of time was undoubtedly the length of the incision. I feel sure that in complicated abdominal cases of this nature it is absolutely essential to see what one is doing if the operation is to be performed with that celerity which is essential to ultimate success. Prolonged groping and tearing through an insufficient opening is a fertile source of delay and disaster; and it is most essential to proportion the length of the incision to the difficulties and bulk of the tumour.

Another important operative consideration to which I would draw attention is the importance of working along the surface of the tumour itself. The laminæ overlying the growth in this case were so numerous that I constantly found myself separating membrane from membrane, rather

than membrane from tumour. When this was the case I incised with the scalpel until tumour substance was seen. In this way the bladder separated anteriorly with remarkable ease, though it seemed at first quite incorporated with the tumour.

The literature and recorded cases of retro-peritoneal tumours is not very large, and must serve as an apology for the brevity of the illustrative remarks upon this case. Leaving aside purulent collections, extravasations of blood, and cysts, as hydatids, dermoids, or pancreatic cysts, the solid tumours in this region resolve themselves into innocent growths, as the fibro-fatty and more rarely the fibro-myomata, and sarcomatous growths, simple or mixed with cartilage. I have seen two cases where cartilaginous tumours of huge size originated from the osseous structures of the spine and ribs; but these in no sense originated in the retro-peritoneal tissue, and should not be classified with the affections of this region. The fibro-lipomata seem to be the more common, and these tumours may attain to a large size. Their situation and relations are very complicated, and they may be so soft as to exactly simulate collections of fluid. All this is well seen in Cooper Foster's celebrated case, where the tumour weighed fifty-five pounds, and was tapped in mistake for ascites. After the decease of the patient this great tumour was found to consist of pure fat, and the relations of the colon and small intestines to the front of the growth were just as is related in the case reported tonight ('Path. Soc. Trans.,' vol. xix, p. 246).

Wells, in his work on abdominal tumours, speaks of three tumours apparently situated behind the peritoneum. The first, weighing twenty pounds, was a fibro-lipoma, and this patient died. The second was malignant, and the operation had to be abandoned. The third, removed from a lady in Pomerania, was called by Virchow a "fibroma molluscum cysticum," but its true nature seems a little doubtful ('Abdominal Tumours,' p. 24).

Certain tumours of the kidney and renal capsule have

contained unstriped muscle (Morris's 'Diseases of the Kidney,' p. 499), but tumours such as I have related this evening seem exceedingly rare. The subject is not alluded to in the more modern books on tumours and abdominal surgery.

Mr. William Anderson, in his excellent opening of the discussion on retro-peritoneal affections at the meeting of the British Medical Association at Carlisle, refers at length to the tumours of the retro-peritoneal space ('Brit. Med. Journ.,' Oct. 17th, 1896). It is obvious from his researches that the most common are lipomata, fibro-lipomata, and sarcomata. He mentions that fibro-myomata may originate in the scattered fibrous bands about the root of the mesentery and broad ligament. He refers to one case at the Tokyo Hospital, where a girl of nine had a number of tumours of a fibro-myomatous nature removed from behind the peritoneum. This patient died of shock. He also alludes to a case where Péan removed a similar tumour from the root of the mesentery which weighed eighteen pounds.

Beyond the two cases referred to by Mr. Anderson, I can find none reported in this country which resemble the case related. Lipomata or fibro-lipomata of huge size have been recorded, among others by Pick ('Path. Soc. Trans.,' 1869, p. 337), Meredith ('Clin. Soc. Trans.,' 1887), and Treves ('Clin. Soc. Trans.,' 1893, p. 101). Mr. Anderson refers to other cases under the care of Continental surgeons. In all the cases where removal was attempted of retro-peritoneal fatty tumours, the operations were very difficult on account of the complicated adhesions and the nature of distribution of the viscera anteriorly. Cases of retro-peritoneal sarcomata have been brought forward in this country by Thornton ('Brit. Med. Journ.,' 1882, vol. ii) and by Lockwood ('Med. Soc. Trans.,' 1895, p. 1).

The removal of malignant growths from this situation must always be peculiarly hazardous, especially if they are soft and vascular; and probably in the majority of

instances the surgeon will do wisely, when the nature of the tumour is verified by exploration, not to attempt the operation. It is worth remembering that retro-peritoneal sarcomata may be secondary to growths elsewhere. I have this year seen a remarkable instance of this nature, when a large growth, easily to be felt anteriorly and posteriorly in the loin, originated by lymphatic infection from a nodule of sarcoma in the testis. No post-mortem examination was held, but the diagnosis was very clear, and was verified by Sir William Broadbent. A similar case to this is mentioned by Sir Hugh Beever, where a large tumour having the colon in front of it formed after removal of the left testis ('Med. Soc. Trans.,' vol. xvii, p. 329).

Mr. Lockwood fully alludes to the difficulties of diagnosing sarcomatous tumours in this region ('Med. Soc. Trans.,' vol. xvii). In his two cases the colon and intestines lay in front of the tumour, as is usually observed. He alludes to the possibility of getting areas of resonance in front of these growths. In the early stages this would, without doubt, be possible. But when the tumours grow to a huge size the gut gets so flattened that this important symptom may be quite absent. It is very essential that retro-peritoneal tumours should be fully reported as they occur. Thus only shall we in time recognise their diagnostic features and appropriate treatment; and it is largely with this view I have ventured to bring this case forward, for it may add a small though important item to a class of affections regarding which little really is known.

(For report of the discussion on this paper, see 'Proceedings of the Royal Medical and Chirurgical Society,' Third Series, vol. ix, p. 90.)