

Fibroid of broad ligament associated with an ovarian cyst / shown by Alban Doran.

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9.
1901
29 MAR 1901
FIBROID OF BROAD LIGAMENT ASSOCIATED
WITH AN OVARIAN CYST

Shown by ALBAN DORAN, F.R.C.S.

(With Plate XIV.)

Two years ago I read before the Society a short treatise on fibroid of the broad ligament.* It was based on a case where I removed a large tumour of this class, distinct from the uterus. The relations of a growth so bulky are sometimes confusing, and in this instance it must have taken long to grow, so that some authorities might contend that it was originally uterine, but had slowly, though completely, separated itself from the uterus. The present specimen is relatively small, yet it was widely separate from the uterus. There can be no doubt of its origin elsewhere than in that organ, and so far it is highly instructive. There remains a second feature of interest, namely, its clinical relation with an ovarian cyst, a new growth of an entirely different type.

E. G—, aged 44, single, was admitted into my wards at the Samaritan Free Hospital on July 9th, 1901. For over eight months œdema of the lower limbs had been observed; in March, 1901, the abdomen began to swell. Mr. H. D. Stewart, of Redcliffe Gardens, sent her to the out-patient department of the hospital, where Dr. Lockyer examined her and diagnosed ovarian tumour, ordering immediate admission.

The patient was healthy and naturally rather thin. The abdomen was greatly distended, and its walls were slightly œdematous. The girth at the umbilical level was thirty-seven inches. A fluctuating tumour extended from

* "Fibroid of the Broad Ligament, weighing 44½ lbs., removed by Enucleation; Recovery; with table and analysis of 39 cases," 'Trans. Obst. Soc.,' vol. xli, 1899, p. 173.

below to the epigastrium (ensiform cartilage to umbilicus seven inches, umbilicus to symphysis pubis eight and three-quarter inches). There was distinct resonance in both flanks. The cervix was pushed up close to the pubic arch. A smooth convex mass came down low in Douglas's pouch and filled the right fornix. The period occurred about every twenty-five days; the show was moderate. Metrorrhagia, probably the result of examination, occurred a week after the last period; no intermenstrual hæmorrhage had ever occurred before.

The œdema of the legs was extreme, the skin very erythematous, and rest in bed did not reduce the swelling. The urine was very clear, and of a golden yellow colour, sp. gr. 1024, acid and distinctly albuminous. The patient had suffered from scarlet fever sixteen years ago, and never from any other illness. The tongue was clean, the bowels opened naturally, and there was no pain during defæcation. The temperature never exceeded 98.2° ; the pulse was 60, small and regular. There was no history of any kind of abdominal pain.

There could be no doubt that the tumour in the abdomen was ovarian. The pelvic swelling was naturally taken for a tumour of the opposite ovary. It seemed to fluctuate, but, owing to its position, it could not be accurately defined. There could be no doubt that it pressed on pelvic structures; hence, probably, the œdema. Malignancy seemed possible, but evidence on this point was not by any means conclusive. Double cystoma, perfectly innocent, often gives rise to much œdema when the smaller tumour is pressed down in the pelvis by its fellow.

I operated on July 18th, with the assistance of Mr. Butler-Smythe. The patient was first placed in the horizontal position. A silvery white cyst wall was exposed on making an incision through the parietes, which, though thin, were very vascular. Ten pints of chocolate-coloured ovarian fluid were removed by tapping. I had to break down numerous septa, and there was difficulty

for a time in delivering the collapsed cyst, owing to a solid oval tumour closely attached to it below.

I found that the cyst had developed in the left ovary; the right ovary and tube were quite normal. The solid oval tumour lay in the left mesometrium, or portion of the broad ligament below the attachment of the ovary, and invaded part of the mesosalpinx, so that the entire left broad ligament formed a capsule for the solid tumour, excepting a portion connected with the cyst. The inner half of the left Fallopian tube ran in this capsule, the sigmoid flexure being associated with it posteriorly. This solid tumour was entirely free from the uterus, which bore two minute subperitoneal myomata on its fundus. The uterus had been pushed up by the solid tumour, which was displaced towards the right by the cyst.

I cut into the capsule of the solid tumour,—that is to say, into the left broad ligament. Enucleation proved very easy, as the tumour lay in a bed of loose connective tissue, quite unconnected with the uterus or with the ovarian cyst. Large vessels coming from below, evidently dilated branches of the uterine artery, required ligature. The pelvis was elevated for the rest of the operation. The ovarian pedicle, which had been clamped during the enucleation, was now ligatured in the usual manner, then much of the capsule was trimmed away, and its anterior and posterior layers sewn over the stump of the ovarian pedicle, as is often done in hysterectomy. The uterus and the right appendages now fell back into the pelvis; the sewn-up capsule of the solid tumour and the ligatured pedicle of the cyst did not cause much displacement of the structures left behind. The sigmoid flexure lay very close to the cut edge of the capsule, but was not kinked. Some fluid was mopped out of Douglas's pouch and the abdominal wound closed.

By the morning after the operation the œdema of the legs and the albumen in the urine had entirely disappeared. No symptoms of parametritis developed, though

*Muller's
cyst. Hve
taped & s
removed.
in Jan
1900
Oth. S
March 1900*

much of the pelvic cellular tissue had been unavoidably disturbed and handled. The patient was in good health on October 14th.

The ovarian cyst.—The cystic tumour of the ovary weighed 5 lbs. 4 oz., and contained over ten pints of chocolate-coloured ovarian fluid. It was very multilocular; some of the cysts were small, and contained glairy, white, mucoid matter. In short, it was a common multilocular glandular cyst, and, without doubt, it had developed quite independently of the solid tumour.

The solid tumour in the broad ligament.—This specimen has been examined by Mr. Shattock at the College of Surgeons. It was heavy for its size, weighing $2\frac{1}{4}$ lbs. In form it was oval; it measured in long diameter (antero-posterior) five and a half inches, vertically three and three-quarter inches, and horizontally four and a half inches. The surface was perfectly smooth, and of a uniform pale red colour. There was no pedicle; large vessels entered its substance from different parts of its capsule. On section the periphery was seen to consist of firm, apparently fibrous tissue, passing without definite demarcation into a loose fibrous meshwork, with transparent substance filling the spaces, which constituted the substance of the tumour. Numerous foci of extravasated blood were detected; one, which shows well in the present specimen, measured half an inch in diameter. This specimen, now in the museum of the Royal College of Surgeons, consists of more than half the tumour. The cut surface appears as when fresh. Plate XIV, fig. 1, from a photograph taken under the direction of Dr. Hubert Roberts, shows the above-described appearances.

Mr. Shattock examined the tumour microscopically, and found that it was a true fibro-myoma. Well-developed plain muscle cells, arranged in bundles, were seen in great plenty mixed with still more abundant fibrous tissue, which in parts had undergone myxomatous changes (Pl. XIV, fig. 2). These fibroids of the broad ligament show all the histological variations of uterine fibroids, ranging

from the type of a pure fibroma to that of an almost pure leiomyoma.

The solid tumour bore some resemblance to that which was exhibited by Griffon before the Société Anatomique de Paris in 1899.* He styled his specimen a fibromyoma originating in the broad ligament; it caused no symptoms, and was not discovered until after the patient's death from some general malady. The patient was only thirty-two when she died; she had borne children and menstruated normally. The tumour was as big as a duck's egg, and was united to the right ovary by a distinct mesentery partly reflected on to the infundibulopelvic ligament, hence it was freely moveable. It was not degenerate as in my case. Though the tumour was small, the corresponding (right) ureter was slightly distended. Had a large uterine or ovarian tumour developed above it, pressure symptoms would soon have appeared, and the tumour itself, owing to interruption of its circulation by the still larger growth, would have undergone degeneration. The relative youth of this patient, thirty-two years, is significant, for fibroids of the broad ligament develop earlier than uterine fibroids, and, as in the cases where Sängert† and myself operated, may attain an enormous bulk in women under thirty.

Since I removed this solid tumour Dr. Galabin exhibited at the October meeting of the Society a fibromyoma of the broad ligament weighing 20 lbs., from a woman aged forty-six (p. 225). The uterus was left behind. Dr. Galabin's tumour was of precisely the same kind as my own, excepting that there were no external conditions to arrest its development, so that it attained very large proportions. Owing, no doubt, to external moulding, it had become very ovoid, its smaller end lying in Douglas's pouch.

In my memoir on 'Fibroid of the Broad Ligament' I

* "Fibro-myome aborigène du ligament large," 'Bulletins et Mémoires de la Société Anatomique de Paris,' Jan., 1899, p. 79.

† Author, loc. cit., tables, Cases 5 and 39.

discussed its pathology, and concluded that there appeared to be no doubt that fibroma or myoma may develop in the broad ligament quite independently of the uterus. In the present case there was no connection between that organ and the tumour, although there were two minute fibroids in the fundus.

Dr. William Duncan, in the discussion which followed the exhibition of Dr. Galabin's specimen, considered that I was incorrect in speaking of these broad ligament tumours as "retro-peritoneal." I maintain that they are essentially retro-peritoneal. Waldeyer rightly speaks of the broad ligament as consisting of two portions. The first is the now familiar mesosalpinx above the level of the attachment of the ovary. Below that point lies the mesometrium; in other words, Waldeyer confines that term (sometimes applied to the entire broad ligament) to its lower portion. Technically a broad ligament cyst between the folds of the mesosalpinx is retro-peritoneal, but clinically and pathologically it cannot be classed as retro-peritoneal, notwithstanding that it is anatomically outside the peritoneal cavity. With a fibroid of the broad ligament it is quite otherwise. It develops in the abundant connective tissue of the mesometrium. In the enormous tumour on which my paper on this kind of morbid growth was based, the mesosalpinx was not invaded on either side. The tumour which I exhibit this evening lay almost entirely in the mesometrium; its upper part just invaded the limits of a mesosalpinx, hypertrophied through its association with a multilocular cyst. The anatomy of the mesometrium is well known. Its anterior layer is very short as it turns upwards, becoming continuous with the parietal peritoneum lining the back of the pubes. Its posterior layer is much longer, going downwards and backwards as the anterior layer of Douglas's pouch. In the space formed by the parting of the layers lies much connective tissue—parametrium, as it is sometimes called, continuous with the same tissue in the back of the pelvis and in the loin. But it is in this essentially retro-peri-

toneal tissue that broad ligament fibroids develop. They stand to cysts of the mesosalpinx in the same relation as retro-peritoneal abdominal tumours, such as Mr. Marmaduke Sheild has described,* stand to cysts of the mesentery.

Cysts of the mesosalpinx and mesentery are anatomically, but not otherwise, retro-peritoneal; the other types under discussion are retro-peritoneal in every sense.

* "A Case of Large Solid Tumour removed with success from the Retro-peritoneal Space," 'Med.-Chir. Trans.,' vol. lxxx, p. 205.

Kelly & Cullen "Myomata of the uterus" (1904)
 p. 51 One classed under "Myomata extended
 from the uterus & lying free in the Broad Ligament"
 p. 37. Record of a parasitic myoma, multiple
 myomectomy, suspension of uterus "Beneath the
 round ligament & in the broad ligament was
 a hard tumour the size of a small egg. It was
 slightly movable. The peritoneum was incised,
 the tumour shelled out & the hole left behind
 closed with catgut. The myoma in the broad
 ligament had no apparent connection with
 the lig & itself or with the uterus" These
 (I do not agree with K & C's interpretation)
 see also ibid p 364, a small myoma in meso-
 salpinx (p fig 254)

DESCRIPTION OF PLATE XIV.

Illustrating Mr. Alban Doran's specimen of "Fibroid of the Broad Ligament associated with an Ovarian Cyst."

FIG. 1.—Showing the cut surface of the tumour. Fibrous bands are seen running in all directions; between them are spaces full of mucoid tissue. There is also a conspicuous area of extravasated blood and numerous smaller extravasations, some punctiform. A torn shred from the capsule is seen; there was no pedicle.

FIG. 2.—A section of the tumour seen under a high power, showing mucoid tissue with bundles of plain muscle-cells.

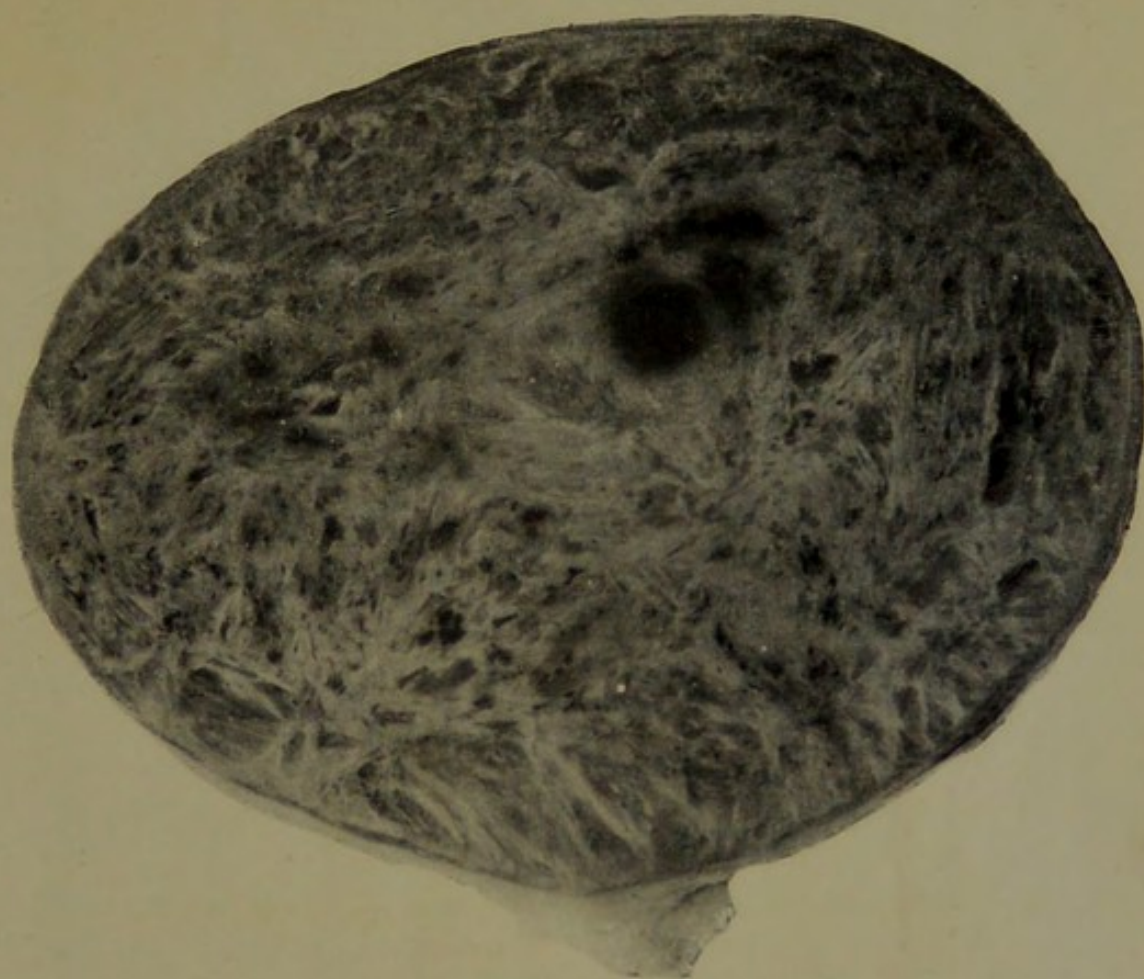


Fig. 1.

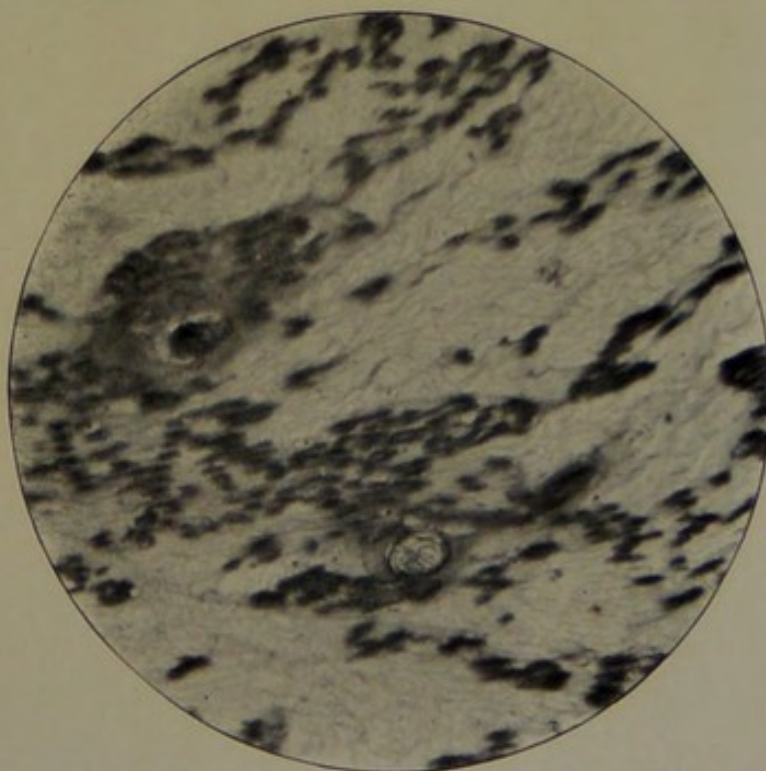


Fig. 2.

Illustrating Mr. ALBAN DORAN's Specimen of Fibroid of Broad Ligament
associated with Ovarian Cyst.

The discussion was continued by the reading of a paper by Mr. ALBAN H. G. DORAN (London). He described a case of Fibromyoma of the Mesentery weighing 30 pounds. After referring to the literature of the subject collected by Bégouin and Julliard Mr. Doran related the particulars of his own case. The patient was a woman, aged 34 years; she had noticed an abdominal swelling for about six months; it grew very large without causing any pain or symptoms of obstruction. It was soft and gave a sense of fluctuation. A diagnosis of ovarian tumour was made. On exposure at the operation it was found to be invested by the anterior or upper layer of the mesentery. It was enucleated with ease as there were no adhesions; nor was any resection of intestine necessary. The capsule was drained and the patient made a good recovery. Mr. Doran described the anatomy of the capsule in this and in similar cases and spoke of tumours encapsuled in other peritoneal folds besides the mesentery proper. A table was given containing clinical particulars of the case and of 12 other cases of the fibroma and myoma type encapsuled in the mesentery. In three of these cases the patient was a male; hence tumours of this class did not necessarily arise from elements associated with the female genital tracts. The question of diagnosis was discussed. As to treatment, if the growth was a fibromyoma removal by operation though dangerous was the right course. The

precise relations of the tumours varied greatly and extensive resection of bowel was often needed, especially when there was a relatively small tumour involving several coils of intestine in its capsule. All the 13 operations in the table were complete except one which ended fatally. Possibly complications might be met with in future cases, as in operations for other types of mesenteric tumour. Lastly, the treatment of shock after the removal of such large tumours and the management of the capsule were considered.