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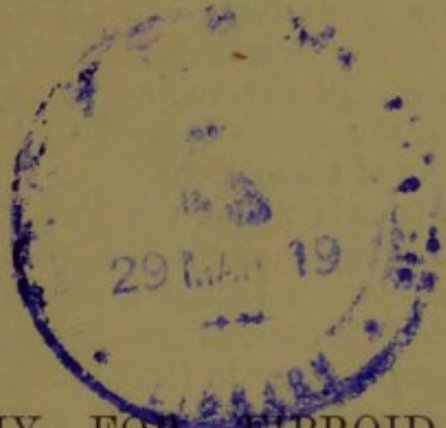
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HYSTERECTOMY FOR FIBROID DISEASE IN
PREGNANCY: THE SOUFFLE AND MUSCULAR
CONTRACTIONS IN RELATION TO DIAGNOSIS.

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HYSTERECTOMY FOR FIBROID DISEASE IN PREGNANCY: THE SOUFFLE AND MUSCULAR CONTRACTIONS IN RELATION TO DIAGNOSIS.

By ALBAN DORAN, F.R.C.S., *Surgeon to the Samaritan Free Hospital, London.*

I REPORTED, last November, three cases where I performed hysterectomy in early pregnancy.¹ In all there was a fibroid in the lower segment of the uterus posteriorly, preventing normal labour or delivery through the vagina by any means, and in all, immediate removal of the uterus seemed to be the best course to pursue in the interests of the patient.

Whatever might be said about the best treatment, in none of these three cases was there any difficulty about diagnosis. On that account, I now relate a fourth instance of early pregnancy complicated by fibroid disease, where diagnosis proved difficult owing to apparent contractions in the fibroid, and the presence of two distinct souffles, and to the great softness of the tumour contrasting with the tenseness of the gravid uterus caused by excess of liquor amnii.

CASE.—On 23rd July 1902, I was consulted by Mrs. H., æt. 30, a patient of Dr. Aurelius Maybury of Landport, who informed me that he had detected a round soft movable tumour on the right side of the pelvis. The right fornix was drawn up, the cervix very patulous, admitting the tip of the finger as far as the os internum. The sound was not used, because pregnancy seemed probable, as there had been no period since the first week in April. Previous to that date menstruation was quite regular every four weeks, with very free show, clot passing daily, yet there was but little pain. The patient had been married for nine years. Her only two pregnancies both ended in abortion at the third month; the last occurred two years before she came under Dr. Maybury's care.

When I saw the patient, a fairly well nourished young woman, the areolæ of the nipples were dark; no milk exuded on pressure. I made a note—"July 23, 1902.—Soft swelling in abdomen reaching nearly to umbilicus. It is firm on right side and soft and tailing off on left, where something can be felt like a foetal foot. Very loud souffle over middle of tumour. *Vagina*.—Cervix far forwards and close against pubes, canal patulous. Mass in left fornix and Douglas's pouch, right fornix empty."

I could not satisfy myself about the nature of this case. I had recently operated on three cases where uterine fibroid complicated early pregnancy, and in the present instance it seemed highly probable that the mass in the left side of the pelvis might be a fibroid. There could be little doubt that the patient was pregnant; the history of abortions

¹ "Hysterectomy for Uterine Fibroid Disease in early Pregnancy," *Lancet*, London, 1902, vol. ii. p. 1451.

and no gestation to term is frequent in married women with fibroids. But deformity of the uterus with cornual pregnancy was possible. Extra-uterine gestation was excluded, for not a drop of blood had passed from the vagina since April, nor in that space of time had the patient ever suffered from any kind of pelvic or abdominal pain.

On 30th September, the patient was admitted into the Samaritan Hospital under my care. The breasts were now full, and milk exuded from the nipples on pressure. The abdominal swelling had greatly increased, without any pain or show of blood.

The swelling was irregular and had become distinctly bilobed, even to the eye. The right lobe was the larger, and extended to three fingers' breadth below the ensiform cartilage, fluctuation was distinct, ballottement was clear, and something like a foetal body could be defined.

The left lobe felt soft, like a pregnant uterus early in the sixth month. On palpation, the deep groove separating this swelling from the right lobe became distinctly deeper, a change detected by the sight as well as by the touch. This deepening disappeared within a minute or two, reappearing when the left lobe was handled again. That lobe distinctly moved during these manipulations,

and gave me and my colleagues the impression, which proved erroneous, that its walls contracted. Its softness contrasted strongly with the tenseness of the right lobe, where, on the other hand, ballottement was distinct.

The cervix was soft, and lay quite forwards and to the right, displaced by a mass which filled the greater part of the pelvis, and was found to be the lower part of the left lobe of the abdominal tumour. On bimanual palpation that lobe felt quite soft. A foetal head, however, could be detected through the anterior fornix, not in the left but in the right lobe;

ballottement was very distinct. There was no indication of any septum in the vagina or in the cervical canal, which was very patulous.

A loud souffle was audible between the umbilicus and pubes, passing to the left lobe. But a distinct souffle was also detected in the right

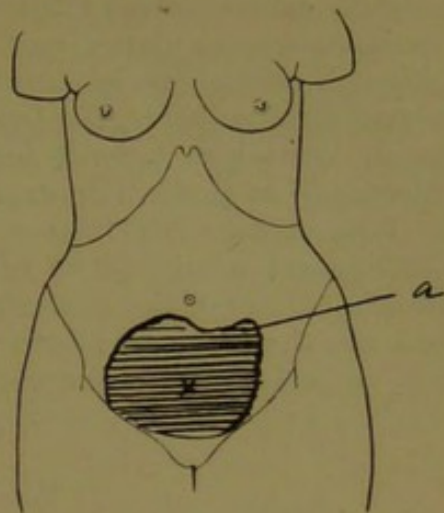


FIG. 1.—From sketch taken 23rd July 1902. Site of the souffle; (a) point where foetal foot could be felt. The depression in the fundus was probably due to irregular contraction of the uterus.

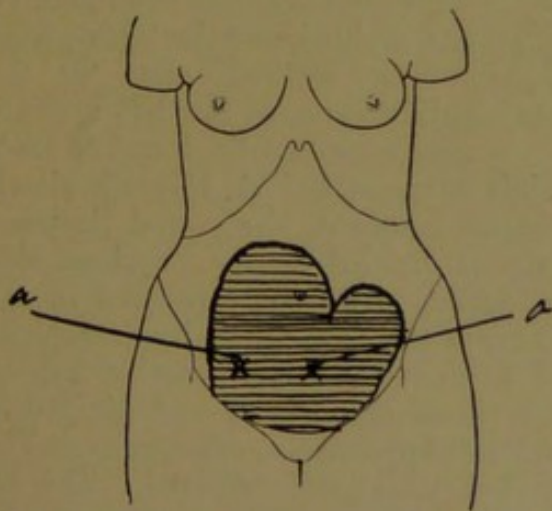


FIG. 2.—From a sketch taken 2nd October 1902. (a) Uterine souffle, already detected in July; (b) loud souffle over the displaced left ovarian vessels.

lobe, almost in the loin, and a wide space separated it from the souffle in the middle line.

Thus diagnosis was obscured, as I have already observed, by the apparent contractions in the fibroid, by its softness as contrasting with the tense gravid uterus, and by the presence of two distinct souffles. Although normal uterine pregnancy, complicated by fibroid tumour, still seemed most probable, the possibility that the left lobe was an abnormal cornu, bearing a second fœtus, could not be set aside. I therefore determined to perform an exploratory operation.

I operated on 7th October, assisted by Mr. Butler-Smythe; Mr. F. W. Collingwood administered gas and ether. The pelvis was raised. I drew out through the abdominal incision a bilobed tumour. The right lobe was the pregnant uterus with distinct hydramnion. The left was a large pedunculated fibromyoma, soft, œdematous, and very vascular;

its lower part had filled Douglas's pouch. The pedicle, short, broad, and thin, was inserted apparently in the inferior segment of the uterus, somewhat posteriorly. In consequence, the uterus was rotated towards the right, so that the left appendages, with the ovarian vessels greatly dilated, lay exactly in the middle line. They were, it could now be seen, the source of the souffle.

I secured the right ovarian vessels and divided them. The left round ligament was ligatured and divided, and the left ovarian vessels secured close to the pelvic brim, so the left appendages were sacrificed and as little

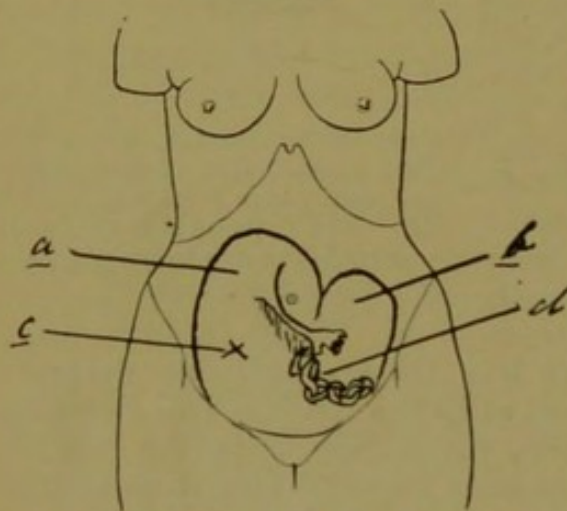


FIG. 3.—From a sketch taken 7th Oct. 1902 after the operation. (a) Gravid uterus; (b) fibroid tumour; (c) site of uterine souffle; (d) left ovarian vessels.

of the big, dilated ovarian veins left as possible. A Doyen's elastic clamp was applied to the right broad ligament, the round ligament tied, and then the whole broad ligament divided on the proximal side of the clamp. The right uterine vessels were easily secured in the parametric tissue, which was, as is always the case, much hypertrophied through pregnancy. I made and turned down an anterior flap of peritoneum, placed a Doyen's clamp across the cervix, and divided it. Then the uterus, with the fœtus and left appendages, came away. The left uterine vessels spouted freely, but were easily secured. The anterior flap was now sewn over the raw surface of the divided cervix, and the abdominal wound closed. The patient made a good recovery.

On 23rd June 1903, Dr. Maybury reported the patient as quite well. No trace of any period had been seen since the operation, over eight months past, and in that space of time she had not been troubled with flushings, nor with any other unpleasant symptoms of an artificial menopause.

Dr. Cuthbert Lockyer kindly examined and preserved the specimen. It consists, as he reports, of a large oval fibroid attached to a pregnant

uterus of the middle of the fifth month of gestation. The tumour has a pedicle $2\frac{3}{4}$ in. wide and very thin, attached to the left side of the supra-vaginal portion of the cervix. Its surface is covered by smooth, healthy peritoneum, without adhesions. On section it was found to be very oedematous and glistening, much clear fluid exuding from spaces between the fibro-muscular strands. These spaces were largest at the periphery of the tumour. The tumour measures $9\frac{1}{4}$ in. in its long or vertical, and $5\frac{3}{4}$ in its short and horizontal, axis. The uterus, after removal, measured $8\frac{1}{4}$ by $6\frac{1}{2}$ in. Its bulk was greatly reduced by the escape of the liquor amnii. The right tube is $4\frac{1}{4}$ in. long; the right ovary measures $2\frac{3}{4}$ by 1 in. The left appendages lie anteriorly in the groove between the uterus and the tumour. The tube measures $5\frac{3}{4}$ in., the ovary $2\frac{3}{4}$ by 1 in.

This sketch was prepared by Dr. Lockyer. It represents the parts removed as seen from behind. The uterus became greatly diminished in

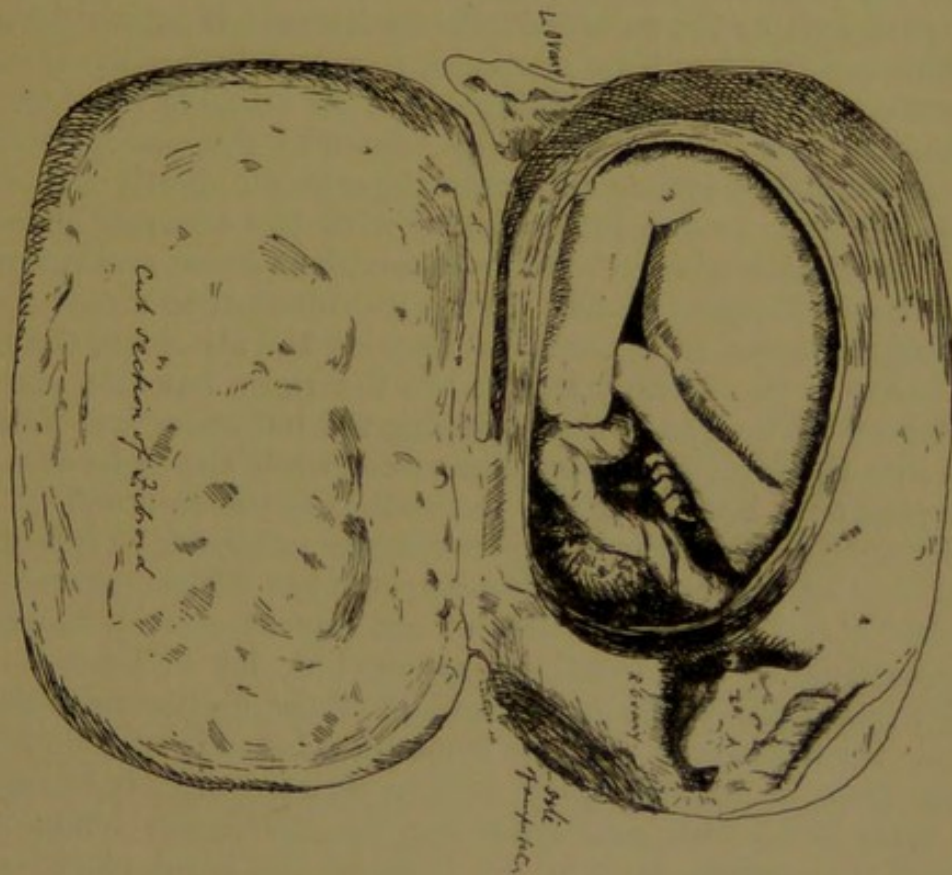


FIG. 4.—Tumour and uterus seen from behind.

size when the liquor amnii escaped, hence in the sketch it looks smaller than the tumour, though in reality it was much larger. The high position of the left ovary is well indicated; it can be understood at a glance how its vessels ran a long course in front between the tumour and the uterus.

As regards the operation, removal of the uterus with the tumour seemed the safest course to pursue. The pedicle of the

fibroid was closely related to the big veins, so that myomectomy would have been dangerous under any circumstances, whilst the attachment of the tumour to the lower segment of the uterus and the cervix would have prevented the lower part of the tumour from rising out of the pelvis as pregnancy advanced. I admit that Cæsarean section might have been practised with success at the seventh month or later, but the patient desired speedy relief on very reasonable grounds, and as she possessed a uterus which would have put her life in jeopardy at any future pregnancy, I think that its removal was justified.

In conclusion, I will say a few words on the souffle and on muscular contractions of fibroids.

The souffle.—The uterine souffle lay in the middle line when there was only one tumour—the pregnant uterus—above the pelvis. When the fibroid rose into the abdomen the uterine souffle lay to the right, and there was a second souffle in the middle line, produced by the enlarged left ovarian vessels rotated forwards.

This rotation has been observed, to a certain degree, in normal pregnancy. Dr. Gillman Moorhead, in his valuable "Notes on the Abdominal and Pelvic Viscera in Advanced Pregnancy,"¹ reports the dissection of a female subject in the seventh month of gestation. "The left ovary came into relation with the anterior abdominal wall immediately above the inter-tuberculous plane, and external to the left mid-Poupart plane. Lying just internal to the ovary runs the left Fallopian tube. . . . On opening the abdomen, the uterus was found to be not only inclined to the right, but also markedly rotated on its long axis, thus bringing the left ovary and Fallopian tube into the position I have described, while the right ovary and Fallopian tube lay posteriorly in relation to the cæcum."

In such a case, the ovarian vessels, enlarged by pregnancy, must follow the corresponding appendages. The presence of a fibroid behind and to the left of the uterus caused an extreme exaggeration of this rotating process, but, let it be noted, the souffle heard previously in the middle of the uterus remained distinct. On the souffle which is sometimes heard in uterine fibroids, when there is no pregnancy, I have written already,² describing two cases in my own practice where the souffle was loud; in one a thrill was transmitted to the palm of the hand placed on the surface of the tumour. This subject need not be dwelt on, as in the present instance the second souffle was caused by the rotated ovarian vessels, and not by large arteries and veins inside the fibroid.

Muscular contractions of fibroids.—There can be little doubt that the apparent contractions of the fibroid were caused by con-

¹ *Trans. Royal Acad. Med. Ireland*, 1902, vol. xx. p. 431.

² "The Harveian Lectures on Fibroids of the Uterus and its Ligaments considered from a Clinical and Surgical Standpoint"; Lecture ii., *Lancet*, London, February 14, 1903.

tractions in the gravid uterus dragging on the short, broad pedicle of the tumour. The deepening of the groove between the two must be mainly attributed to the same cause. I think that it is very questionable whether the fibroid itself actually contracted.

That a fibromyoma undergoes slow contraction with intervals of relaxation there can be no doubt, but the process extends over hours or days. The relatively rapid contractions of the gravid uterus are very rarely simulated by a fibroid. Pozzi, in discussing the diagnosis of fibroids in his well-known text-book, warns us against feeling sure that we can detect contractions of this kind. A fibrillary movement in the muscles of the abdominal walls, or the sliding away of a loop of intestine, may, he reminds us, lead to illusions about the contractile power of the essential tissue of a uterine fibroid.

Granting that contraction may occur, its occurrence proves that the fibroid must be pathologically an almost pure myoma; whilst the most distinct contraction felt on handling a fibroid might be confined to its capsule. In the latter case, the capsule must be a fairly thick layer of the muscular wall of the uterus. Fibroids certainly share in the evolution of pregnancy when they are pathologically almost pure myomata. This fact I demonstrated fifteen years ago.¹ But in the specimen on which my demonstration was founded, although there was great hypertrophy of the muscle cells in the tumour itself, a characteristic interstitial fibromyoma, the process of evolution was, as might be expected, yet more marked in its capsule.

In the present case there was pregnancy, but the fibroid was very oedematous, so that, although there was undoubtedly muscular tissue, its contractile power must have been trifling. I admit, however, that a slight amount of contraction might have taken place, greatly exaggerated by the contracting uterus dragging on the pedicle of the tumour. As for the capsule in this case, where the tumour was a subserous fibromyoma, it contained little or no muscular tissue, and therefore could not have undergone contraction.

¹ "On Myoma and Fibromyoma of the Uterus and Allied Tumours of the Ovary," *Trans. Obst. Soc. London*, vol. xxx. p. 410 and pl. ii. fig. 3.

