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RETENTION OF MENSTRUAL FLUID IN ONE HALF OF A DOUBLE UTERUS.

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HÆMATOMETRA in a single uterus from either congenital or acquired obstruction of the cervical canal or of the lower generative tract is by no means uncommon, and the literature on the subject is abundant.

Retention of menstrual fluid in one half of a double uterus is a much rarer condition, and I, therefore, venture to record the following case in which menstruation occurred normally from one half of a uterus septus while an intermittent hæmatometra recurred in the other.

Miss C., æt. 24, I first saw in November 1895 when she complained of an intermittent pain in the right side and of irregular hæmorrhages. Her history at that time, so far as it was imperfectly ascertained, was that she commenced to menstruate at the age of 16, and since then she had been perfectly regular up to the present time—every twenty-eight days for from three to four

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days, the discharge being somewhat excessive and accompanied by a certain amount of pain. There had been considerable leucorrhœa for some time and occasional hæmorrhages, which at first I understood occurred at the menstrual period. She had had one ten days before I saw her.

She was admitted to St Luke's Home, and on vaginal examination the uterus was found enlarged, the walls seemed thickened, and the cavity measured three inches. I came to the conclusion that the patient suffered from an early fibroid condition of the muscular coat of the uterus, and an accompanying endometritis. On this diagnosis I resolved to curette the uterus, and the operation was performed on 1st December 1895.

In due course the patient left the Home feeling then perfectly well. After three months she returned and complained that although she had had no further hæmorrhages the pain in the right side had returned, and was increasing just as it had done so often before. I then went more carefully into the history of the pain, and ascertained that for six years she had suffered from a pain in the side—attributed by her to a blow from a book—which was relieved only by a hæmorrhagic discharge which occurred about every four months. It was also discovered that after a hæmorrhage the pain practically disappeared for a few weeks and then set in and got worse and worse until once more relieved by the flow from the vagina. Further, besides this gradually increasing pain, the patient every month for a day or two between two of her normal periods suffered from an acute exacerbation of pain and felt as if she were to be unwell, but there was no external sign of menstruation until after four months had elapsed, when a "hæmorrhage" did set in. She also described this discharge as not being like pure blood or like ordinary menstrual fluid, but, to use her own words, "more like brown paint," and it had never been coincident with the menstrual epoch but had always come on some days after the regular discharge had ceased. The abnormal discharge generally continued for about three weeks.

On examination at this time, three months after the date of curettage of the uterus, there was to be felt a marked bulging in the right fornix, and a distinct well-defined fulness in the hypogastric and the right iliac regions. On noting this, the patient told me that she herself had always observed a swelling in the right side before a hæmorrhage came on, and assured me that it disappeared when it set in. She was kept under observation for six weeks longer, and during this time the pain in the side gradually increased, as did also the size and tenseness of the pelvi-abdominal swelling, till both were greater than ever before. The diagnosis was still doubtful, as to differentiate between a sessile ovarian tumour and a dilated tube, which were then the alternate diagnoses, was extremely difficult. At this time, as afterwards, I was greatly assisted by Dr Haultain, who kindly

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saw the case with me, and ultimately we resolved to aspirate, per vaginam, the tumour so as to clear up the diagnosis if possible. On April 15, 1896, this was accordingly done. The fluid which escaped was of a dark chocolate-colour—indeed just like altered menstrual fluid—and on submitting it to Dr Noël Paton, he reported that the fluid contained chiefly altered blood corpuscles and some pus cells. After careful consideration, from the history of the case, and from the nature of the fluid, it was concluded that the patient was suffering from retention of menstrual fluid in one half of a double uterus, and that this half had only an imperfect communication with the common cervical canal. Probably every now and again the obstruction was overcome, and the patient for the time being relieved of her symptoms. She happened to see the aspirated fluid, and at once said it was of the same nature as that which she passed about every four months.

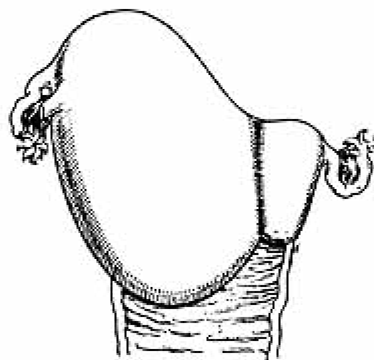

FIG. 1—Showing the normal and the dilated half of the uterus.

Miss C. was now discharged from the home, the pain and swelling having disappeared, but reported herself every fortnight until June 10th, when she was once more admitted with a recurrence of all her symptoms except the hæmorrhage, which had not come on since the aspiration of the swelling. On examination, this was found to have recurred as before, and was bulging downwards into the vagina as well as being easily palpable through the abdominal wall as before.

On 27th June, the patient was anæsthetised, and I first made an incision into the tumour per vaginam, and at once introduced a finger through the opening into a cavity about the size of that of a large cocoanut.

The interior surface at first felt absolutely smooth, but on withdrawing my finger and allowing some of the chocolate-coloured fluid to escape, and then re-introducing it, the cavity seemed much smaller, and the walls corrugated and irregular. On thoroughly washing out the fluid and again exploring the cavity, it became evident that one was dealing with a horn of a double uterus, and the diagnosis of hæmatometra was confirmed. Further, on passing a sound into the single cervix and onwards into the left half of the uterus, and a finger into the sac just opened, the separation between the two halves at the level of the cervical canal was found to consist of a moderately thin structure,

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and with little difficulty the sound was forced through the septum, the object being to restore the communication between the two parts. The opening was enlarged by a pair of curved dressing forceps, and, thereafter, a drainage tube inserted. Finally, the opening which had been made into the swelling in the lateral fornix was sewn up with catgut so that all discharge should take place through the tube inserted through the cervical canal.

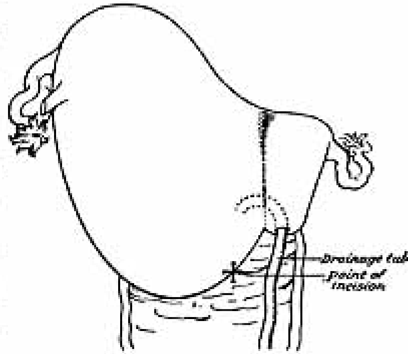

Fig. 2.—Showing point of incision and drainage tube.

For some days the retained altered menstrual fluid continued to discharge through the tube, and the cavity was regularly irrigated, but this seemed to get less and less daily, until no swelling could be felt through the abdominal wall.

In the course of a week the patient seemed perfectly well, and complained of absolutely no symptoms. She remained in the Home for some weeks under observation, and from time to time the tube was changed and bougies passed along the cervix and into the right horn of the uterus so as to ensure that the opening was patent.

The patient's menstrual history after the operation is extremely interesting. Ten days after it she menstruated, and she observed that the period was what was her normal flow, and that none escaped through the drainage tube which had been left protruding beyond the vulva. Exactly a fortnight later she menstruated again, but this time the fluid escaped entirely through the tube, and, therefore, came from the horn which had been the seat of hæmatometra. This period was not so great in amount as the previous, but was accompanied by more pain. A fortnight later she had her normal period, somewhat excessive, and fourteen days later still, she menstruated again through the tube. I have no reason to doubt the patient's statements on this point as she was a trained nurse, and unusually intelligent, and volunteered the information. She left the Home in the end of August to report herself in two months, and in the middle of October she wrote me from Banff that she was very well, but still menstruated every fortnight, alternately from the tube and *per vias naturales.*

I regret to say that immediately after this she developed an attack of acute rheumatism with severe cardiac complications—apparently both pericarditis and endocarditis—to which she succumbed in the beginning of November. Dr Donald of Banff, who attended her in this illness, kindly informed me that death

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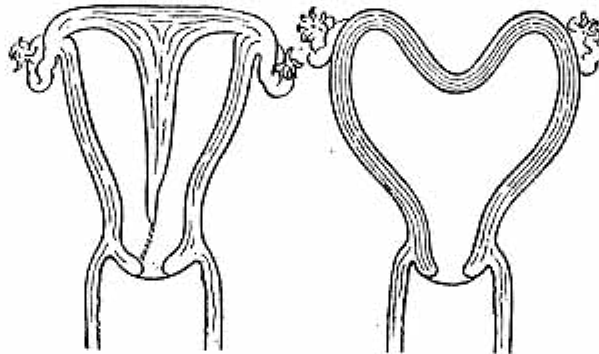
was sudden, and, in his opinion, due to pulmonary embolism. During her illness she menstruated and complained of more pain than usual, but there seemed to have been nothing in her pelvic condition to hasten the unfortunate result.

It seems to me that this case possesses several interesting features. There is no doubt that this girl had a double uterus, and that one half had a very imperfect communication with the cervical canal. It is probable that the half, which afterwards became dilated, did not begin to function till later than the other, for Miss C. stated that for three years she menstruated quite normally, and it was not till she was the age of eighteen that she began to complain of the curious hæmorrhages from which she suffered. When first I saw her I mistook the nature of the case entirely, and this is partly explained by the fact that shortly before this she had a "hæmorrhage," so that the horn had become quite small. The operation of curettage seems to have effectually closed up the communication between the two parts of the uterus, for after it she was longer without a discharge of the "brown paint" like fluid than ever before, and the pain and swelling in the right side were greater than she had ever observed. The apparent alternate menstruation from the two horns is also interesting. The "hæmorrhages," which she complained of, were never coincident with the normal flow, but occurred ten days or a fortnight later, when the horn was threatened with still further distension from a fresh accumulation of retained fluid, and later, after operation the patient herself observed the alternate flow every fortnight from the vagina and from the tube I had inserted into the formerly dilated horn. This alternate menstruation occurring in cases of double uterus has been noted by especially Kussmaul, Emmet, H. F. Walker, and Aikman.



UTERUS SEPTUS. FIG. 2. UTERUS BICORNIS.

The diagnosis was difficult, and even now it is impossible to say what the exact condition of the uterus was, but there is no

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doubt that the uterus was divided. I have used the word "horn" loosely; it was not, however, possible clinically to detect any space or depression at the fundus between the two parts as is usually the case in the "uterus bicornis," so that I am inclined to consider the case rather one of "uterus septus," in which there was no external sign of the congenital malformation (Fig. 3.). When I saw the case at first, the uterus merely seemed hypertrophied and especially large transversely. The septum, as found at the operation, was well marked, thick, and muscular, but less so in the cervical region through which I forced the sound. It may be urged that the case may have been one of hæmato-salpinx, but an extra-uterine pregnancy is entirely out of the question, and it was not an effusion of blood into the lumen of the tube from any other cause. I am well aware that some cases have been recorded in which a supposed dilated tube has proved, post-mortem, to be a distended horn of a double uterus, and *vice versâ*, but it was in this case possible to determine that the walls of the sac were uterine and not tubal. When the Fallopian tubes dilate, the walls invariably become thinned, whereas when the uterus expands from any cause—be it an embryo sac, retained fluid, or a myoma—the walls hypertrophy. In my case, on introducing my finger into the sac, one was struck with the marked thickness and muscularity of the walls, so that it is quite certain the condition was uterine and not tubal.

I may mention that there was no abnormality of the vagina or external organs of generation.

With regard to the literature of this comparatively rare condition, I would chiefly refer those interested to the paper by Dr Cullingworth, read before the American Gynæcological Society in 1893. In this he has collected and given in detail all the most striking recorded cases up to that time. They are nineteen in all, and are cases of retention of menses in one-half of a "double uterus," and I have appended a list of them to this paper. Since 1893, four cases have been recorded, and are also appended here, all of which presented features similar to those which I have described,—namely, the phenomena of "free menstruation + those of retained menstruation," and it is to be noted that the mortality following the operation for relief of this condition is very great. Of the recorded cases, 50 per cent. died—all from peritonitis following the operation. In most, the diagnosis was made only after opening the abdomen, and later, the retention of fluid was dealt with per vaginam.

In some, merely an opening was made into the sac with subsequent drainage, while in others the cervix was so divided as to communicate freely with both the normal and the abnormal half of the uterus. One can see that in the procedure adopted in my case, there was some risk of imperfect drainage of the lower end

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of the sac and possible pyometra, but fortunately this did not occur and the vaginal bulging entirely disappeared.

In conclusion, I wish most gratefully to acknowledge the valuable advice and assistance I received from Dr Haultain, both in the diagnosis and the management of the case.

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Dr Haultain congratulated Dr Lackie on his lucid description of this most interesting case. Having been fortunate in being associated with Dr Lackie in the observance of the patient, the paper was to him particularly interesting. He had nothing to add, but could only corroborate every detail which had been described. Perhaps the point of greatest interest was the occurrence of menstruation from each half of the uterus at different periods. This undoubtedly increased the difficulty of diagnosis, as one would naturally expect in a hæmatometra to have the pain of distention of the uterus coincident with menstruation. The history in this case, however, closely simulated that of hydrops tubæ profluens, as described by Croom in his paper read before the Society on the

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Mittelschmerz. He only regretted that, as the patient had died, a post-mortem examination had not been made.

Dr Berry Hart remarked on the interest of the paper. Dr Lackie had also recorded it very well. Developmentally the septum of the uterine portion of the Müllerian ducts had evidently persisted. The cervical atresia could be explained as follows:—At or about the fourteenth week of fœtal life the lumen of the Müllerian vagina and lower part of the cervix becomes blocked with cells derived from the Wolffian ducts. These normally break down in the centre, and form the permanent lumen. The failure to do this is apparently the cause of the atresia, which in this case was limited to the cervix of the right uterus.

Prof. Simpson remarked that Dr Lackie's communication was a very valuable addition to their Transactions, because the condition was one of great rarity, and the demonstration had been so complete of the alternate menstruation from the two halves of the uterus.

Dr James Ritchie said that it was not yet known by what nervous mechanism there are regulated uterine contractions and also the ripening of ovarian follicles. It has been supposed that these are under the control of ganglia in the uterus itself, similar to those in the heart wall. In Dr Lackie's case is it possible that there were two ganglia, one in each side, which acted independently, and induced the flow at separate times?

Drs R. C. Buist, *Barbour*, and *Fordyce* also spoke.

Dr Lackie, in reply, said that he could not explain why it was that only every four months a discharge occurred from the right half of the uterus, but he supposed that the opening between the dilated horn and the cervical canal was so small that it required considerable distention to force it. He was much interested in Dr Berry Hart's remarks on the development of the condition, and grateful to Dr Barbour for his hints as to the accuracy of the diagrams shown. He begged to thank the Society for the kind way in which his paper had been received.

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