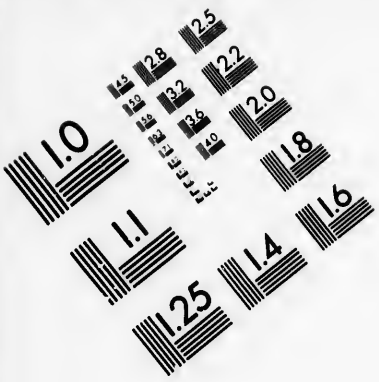

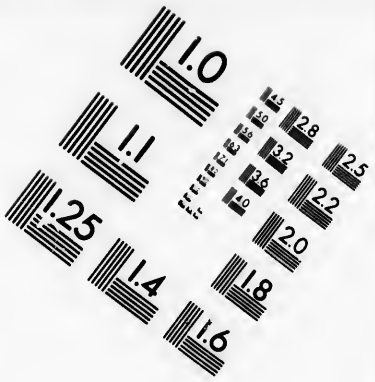

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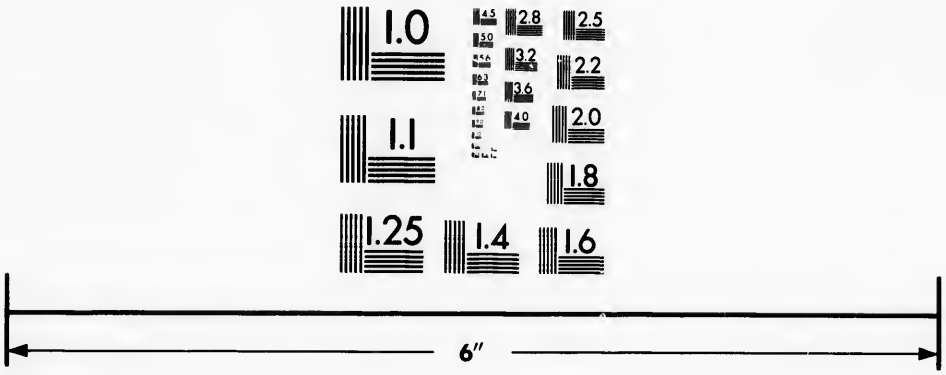

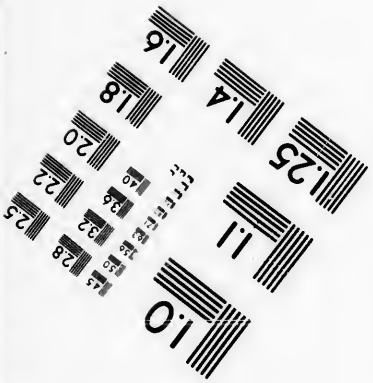

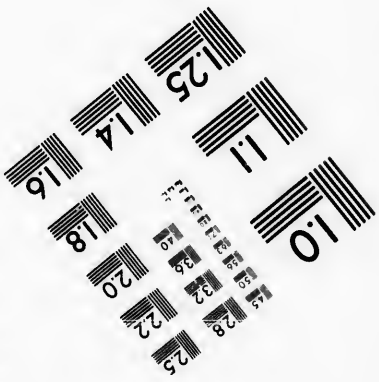

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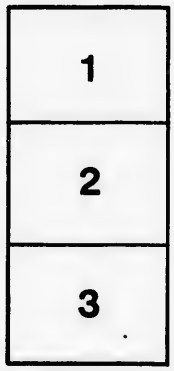

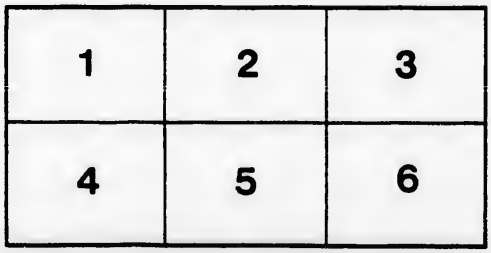

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A SERIES OF NINE ABDOMINAL PAN-HYSTERECTOMIES PERFORMED IN ONE YEAR FOR UTERINE FIBROMYOMA.

BY

F. A. L. LOCKHART, M.B., Edin.,

Lecturer in Gynæcology, McGill University, Gynæcologist to the Montreal General Hospital and Protestant Hospital for the Insane, Montreal.

(*Reprinted from the Montreal Medical Journal, October*, 1898.)

A SERIES OF NINE ABDOMINAL PAN-HYSTERECTOMIES PERFORMED IN ONE YEAR FOR UTERINE FIBROMYOMA.[1]

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As nine patients have undergone abdomino-vaginal hysterectomy for uterine fibroid disease at my hands from January, 1897, to January, 1898, only one of whom died, the following analysis of the cases may prove of interest.

The average age of the patients was 40 years and 6 months, the youngest patient being 32 and the oldest 57 years of age. In only two had the climacteric been reached and in these two it had occurred two and thirteen years respectively before operation. The age at which these women first menstruated averaged thirteen years and eleven months, the extremes being twelve and seventeen.

Sterility.—Six of the patients were married, and of these, three were absolutely sterile, one had had one miscarriage but no full-time children; one had had one full-time child and no miscarriages; and one had carried seven children to full-time and had miscarried once. Of those who were absolutely sterile, one uterus contained an interstitial tumour, while the other two patients had multi-nodular tumours scattered all through the uterus. The patient who had miscarried once had two interstitial fibroids, while the uterus of the woman who had carried seven children to full time was the seat of general fibroid enlargement and one small sub-mucous nodule. These women had been married for from two to twenty-seven years. While the number is too small upon which to form any opinion, it is seen that in this series the sterility was most marked when the tumours were interstitial, but it is quite likely that the presence of these growths played a very small part in the production of this sterility.

Symptoms.—Headache was a marked symptom in cases 2, 3, and 4, but in case 3 was due to defective vision and was cured by the patient wearing proper glasses.

Abdominal enlargement was the chief complaint in cases 3, 5, 6, 8 and 9, although it was plainly evident upon inspection in all.

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[1] Read before the Medical Society of Northern New York, October 11th, 1898.

Pressure symptoms in the form of pain in the pelvis and thighs and obstruction to the circulation in the limbs were noticed in all but Nos. 1 and 9. It is strange that none were felt in case 9 as the tumour was a large one, but their absence may be accounted for by the fact that the growth was entirely abdominal, resting on the brim of the pelvis and was so firm as not to sink down into any of the hollows which contain the nerves and vessels. In No. 6, the tumour and uterus encroached to such an extent upon the right side of the pelvis that the vessels of that side were pressed upon, resulting in œdema and swelling of that leg.

In cases 4, 8, and 9, advice was sought chiefly on account of flooding, the tumour being entirely sub-mucous in Nos. 4 and 9, but more deeply situated in the uterine muscular tissue in No. 8. In all of the other cases, the growth was either sub-serous (as in the majority) or interstitial. Menstruation was both too frequent and too profuse in cases 1, 2, 4, 5, 7, and 9, while in Nos. 3 and 6, the flow was very scanty, and in both cases the tumour was entirely of the sub-serous variety.

Where the patient suffered from dysmenorrhœa, the pain began with the flow and lasted during the period in six cases. In No. 7, the pain began a few days before the flow and lasted until four days after the latter had ceased. This patient had a multilocular cyst of the left ovary, which, I think, accounted for the pre and post-menstrual pain, as it is not often that the pain comes on some days before the flow unless the appendages are diseased. The situation of the tumour in this series of cases made no difference in the degree of pain felt by the patient.

Operation.—In the first four cases, the operation was performed as follows: After thoroughly curetting the uterine cavity and closing the cervix with a running catgut suture, the abdomen was opened by the usual incision in the middle line, and both broad ligaments were tied off in sections with stout catgut ligatures, the ligature including the ovarian and uterine arteries, and were divided. Peritoneal flaps were dissected off the uterus in front and behind, the anterior flap including the bladder. The vagina was then opened and its attachments to the cervix were divided with scissors, and the whole mass removed. Anterior and posterior peritoneal flaps were united to the anterior and posterior vaginal walls respectively so as to cover over the raw surfaces and also to prevent undue shortening of the vagina, after which the top of the vagina was closed in by a running suture of catgut. The abdominal cavity was then wiped dry and the incision in the abdominal wall closed by three rows of sutures. These con-

sisted of a continuous suture of fine catgut for the peritoneum and one row of interrupted silkworm gut sutures for the fascia of the rectus and another similar row for the skin.

In the 6th, 7th and 8th cases, after curetting the uterine cavity and closing the cervix with catgut, the vagino-cervical attachments were separated, the uterus pushed well to each side and the space thus formed was packed with gauze. The abdomen was then opened and the ovarian vessels were ligated and divided. An anterior flap of peritoneum was then formed and the broad ligaments opened up in such a way as to permit of the ligature of each uterine artery *per visu*. The posterior flap of peritoneum was then formed and the division of the broad ligaments completed. As the vaginal attachments had been previously divided from below, the uterus and tumour were quite free and could be lifted out of the abdominal cavity. All bleeding points were then secured by fine catgut ligatures and the two vaginal walls united. The peritoneal flaps were then sutured together so as to cover in all of the raw surface including the ligatures which had been applied to the ovarian and uterine arteries. The only point of difference in the operation in the 5th and 9th cases is that the whole operation was performed through the abdomen as the cervices were too high up in the vagina to allow of the combined operation.

Complications.—The operation was complicated in four cases. In No. 1 the right ovary formed a cystic tumour, containing ten ounces of a dark grumous fluid, composed largely of extravasated blood. This was densely adherent to its corresponding tube, the upper part of the rectum and to the posterior surface of the uterine fibroid. These adhesions were separated and the cyst was removed, after which the tumour and uterus were likewise removed by total hysterectomy and the abdominal cavity wiped dry. The incision was closed by three rows of sutures without any drainage being employed.

In case No. 3 the complication was caused by the patient having undergone a previous abdominal section, as a result of which the omentum was firmly adherent to the old cicatrix. This adhesion was separated with some difficulty and the operation of hysterectomy proceeded with.

The seventh patient of the series had a multilocular cyst of one ovary, in addition to the uterine fibroid. This was the size of a large cocoanut, and was densely adherent to the surrounding intestines, but was eventually removed before proceeding with the hysterectomy.

Mrs. M., first case (No. 5) is deserving of a somewhat fuller description. She was a widow, 57 years of age, complaining of weakness

and pain in the back and left groin. These symptoms had been present for the last three years and, at times, were so severe as to confine the patient to bed. She has lost flesh rather rapidly during the past year, and she attributes this to her appetite having been very poor. Even since her symptoms commenced three years ago, she has had a profuse thin yellowish watery discharge, but it has been neither hæmorrhagic nor malodorous. Menstruation began at fourteen years of age, recurred regularly every four weeks, lasting for four days, and was always accompanied by severe pain. She was never pregnant. Menstruation ceased entirely thirteen years ago, at which time she had a submucous fibroid removed. On making a vaginal examination, a multiparous cervix was felt high up and to the right in the vagina. The centre and whole of the left side of the pelvis were filled with a hard mass. Bimanually, the mass was felt to be the size of an adult head and to be firmly fixed in the pelvis. It was rounded and well defined on the right side, but it gradually became more and more indistinct to the external hand on the left side, pressure over the upper part of the mass on the side causing intense pain, which lasted for nearly 24 hours. The diagnosis was a uterine fibroid tumour with chronic pelvic peritonitis, the tenderness on the left side being probably caused by the inclusion of the ovary of that side in adhesions.

At the operation, the uterine cavity was curetted, the instrument bringing away a quantity of broken down purulent material. On opening the abdomen, the cæcum, descending colon and rectum were found to be adherent to the tumour, a mass the size of a small orange lying between the descending colon, the left broad ligament and rectum. After separating the cæcum from the tumour, work was begun on the left side, the adhesions being so dense that their division had to be begun with the knife. While separating the colon from the mass below it, a quantity of intensely fœtid pus welled up from what, on further dissection, proved to be an old pyosalpinx, which had ruptured on the posterior surface where it was closely adherent to the rectum. This abscess sac (the left tube and ovary) was shelled out of its bed of adhesions, tied off and removed. All of the pus was carefully wiped up as soon as it appeared at the orifice of the rupture, the general peritoneal cavity being protected by a large pad. The tumour and uterus were now comparatively free, so both broad ligaments were tied off and divided, together with the uterine artery on each side. An interior and posterior flap of peritoneum were formed, after which the vaginal attachments were divided and the whole mass removed. The raw surface was packed with iodoform gauze, one end

being thrust into the vagina for drainage and to allow of its removal. The vesical flap was sewn to the rectum and to the peritoneum at the upper margin of the raw surface on the posterior pelvic wall, after which the whole abdominal cavity was well swabbed out and a glass drainage tube inserted, the incision being hurriedly closed with two rows of sutures as the patient was in such a weak condition. A small gauze wick was introduced into the tube to assist drainage, but the abdominal cavity was not flushed out with salines as this would only have tended to spread any pus which had escaped from the abscess and not been removed by the swabs. The tube was removed on the third day, as it remained quite dry after the first 48 hours. The orifice of the track of the tube was kept open by a light plug of gauze for a few days until it had apparently granulated up. The vaginal packing was removed daily for one week, at the end of which time dressing was discontinued as there was no discharge. As far as pulse and temperature went, the patient made a good convalescence, the pulse only once going above 100 after the first 24 hours, it touching 102 beats per minute on the second day. The temperature was still better, not reaching 100°F. once after operation, although it stood at 102°F. the day before. Notwithstanding this practically non-febrile chart, the pulse and temperature being taken every two hours, on the eleventh day as the patient was turning herself in bed, a great quantity of pus gushed up from the track of the tube, leaving a cavity which only closed up after over three weeks careful attention, the cavity being washed out daily with hydrogen peroxide, a small rubber drainage tube inserted and the opening covered with gauze. This shows how pus may form and only indicate its presence by slight rises of pulse and temperature and also without occasioning the slightest degree of pain, there being absolutely none in this case. A culture from the contents of the ruptured tube, taken at the time of operation but before the tube had been removed from the abdomen, showed that the only germ present in the pus was the B. coli. Unfortunately, no culture was taken from the pus which escaped from the tract of the drainage tube, so that it is impossible to say just what germ was present. It is well-known that the colon bacillus will cause suppuration but is not a very virulent germ, so that it is probable that the bottom of the drainage tube track was infected by some of these bacilli which had penetrated the wall of the bowel where it was weakened by the separation of the adhesions. This patient made a good recovery eventually. She has been seen within the last four weeks and is quite well, there being no evidence of weakness at the site of the drainage tube.

The only other case worthy of detailed mention is No. 8, this being the only one followed by a fatal termination. This patient was a strong multiparous woman, thirty-one years of age, who had a submucous fibroid the size of an adult head. Beyond the fact that she suffered from intense dysmenorrhœa and menorrhagœa, the only point in the history worthy of note is the extreme rapidity of growth of the tumour. In March, 1894, the patient's pelvic contents were very carefully examined under anæsthesia, at which examination the uterus was felt to be ante-flexed but not enlarged. Early in 1897, the patient married, and in June of that year consulted me for pelvic pain. On making a local examination, the uterus was found to be the seat of a fibroid the size of a very large cocoanut. Intra-uterine galvanism was given a fair trial, but its only effect was to cause such great pain that both the patient and her husband insisted upon an operation being performed. On October 23rd, 1897, abdomino-vaginal pan-hysterectomy was performed in my private hospital. There was absolutely no complication and the operation was over in sixty-five minutes. The patient's recovery was smooth and uneventful until the night of the 31st, her pulse, respiration and temperature being well represented by the accompanying chart of the average for the whole nine cases. She had been feeling very well all day, laughing and chatting with her husband and parents. At 11.30 p.m. she woke up complaining of pain in the left iliac region. Her bowels had moved during the day, but the nurse now emptied them by an enema and gave her ℥ss of brandy as she felt weak. This made such an improvement that the patient went to sleep, the pulse being regular and strong. At 1.30 a.m. she again woke up and said she had a "queer sensation." Her pulse was irregular and weak and her hands cold. She was given more brandy, but it did her no good, and I was sent for. Before I could arrive, however, she suddenly sat up in bed, vomited a little thin watery fluid and fell back again, only breathing three or four times after I reached the bedside at 1.40 a.m. Unfortunately no post-mortem examination was allowed, but I have no doubt in the least but that the cause of death was pulmonary embolism. There had been no evidence of a cardiac disease to be discovered although the patient's heart had been carefully examined on several occasions during the five or six years that she had been under my care. Septicæmia was out of the question, as there was not the slightest symptom of it from the day of the operation. Slipping of a ligature, followed by internal hæmorrhage, may also be put to one side as a cause, as it was eight full days after the operation by which time the pelvic vessels have become effectually plugged and there was

neither the pallor nor the sighing respiration which are seen in internal hæmorrhage. I have little doubt but that the pain in the left side of the pelvis complained of at 11.30 was caused by the temporary arrest of an embolism in one of the pelvic vessels. This became dislodged and subsequently found its way into one of the pulmonary vessels and so caused death.

After Treatment.—In these nine cases, opium was only given to three patients, each of whom received ten minims of Battley's solution hypodermically once on the night after the operation.

Only two of the patients required post-operative use of the catheter, viz., in Nos. 3 and 8, who required it for 48 and 72 hours respectively

Stimulation after operation was resorted to in the majority of cases not as a routine measure, but because each patient required it.

The following table will show the particulars as to kind and quantity of stimulant employed:

Case.	Kind and Quantity of Stimulant Employed.
1	Strychnine gr. $\frac{1}{30}$ q. 6 h. for 1st 8 days.
2	" " $\frac{1}{40}$ t. i. d. for 1st 21 days. Brandy ℥ss in nutritive, enemata q. 4 h. for 2 days.
3	Brandy ℥ss in nutritive enemata q. 4 h. for 2 days and champagne ℥ss p. r. n. for vomiting for one day.
4	Brandy as above. Also 3 saline enemata during 1st night.
5	" " " Also strychnine gr. $\frac{1}{40}$ q. 4 h. for 10 days. Also 2 saline enemata during the 1st 8 hours.
7	Strychnia gr. $\frac{1}{60}$ t. i. d. for 2 days.
8	" " $\frac{1}{40}$ t. i. d. for 2 days. One saline enema as soon as removed from the table.
9	Strychnia gr. $\frac{1}{40}$ q. 4 h. for 10 days. One saline enema just after operation, and ℥ss-℥ss brandy or whiskey as required for several days after operation on account of a weak heart.

From the accompanying chart which represents the average of the morning and evening pulse, respiration and temperature of nine cases for eight days and eight cases for the remaining six days, it will be seen that the temperature reached the highest point on the second day after operation, when it ran up to 100.2° F., steadily declining from here to normal, which was reached on the eighth day. The pulse

and respiration were the most rapid on the night after the operation, reaching 105 and 26 respectively. They then steadily fell until the fifth day when they both again quickened, taking three days to reach 88 and 23 respectively and again fall to the point from which the second rise started, viz., 82 and 20, in the vicinity of which they remained until the patients were discharged.

A few of these patients returned to hospital after dismissal, complaining of the usual symptoms of the menopause, and were given ovarian extract, gr. v., t. i. d., after meals. All showed considerable amelioration of their symptoms for the first few weeks but the improvement was only temporary.

Although the one death brings up the mortality in the above series to 11.11 per cent., it will be acknowledged, I think, that that death was entirely unpreventable, and the combined results show that abdominal hysterectomy for moderate sized fibroid tumours of the uterus is not an operation which ought to be followed by a high rate of mortality when proper precautions are taken not only at the time of operation, but in the preparation and after treatment of the patient.