Doran received a false report of the patient's death, but on February 12th, 1908, a patient came to see him at the hospital. She complained of dyspepsia, due, it appeared, to excessive tea-drinking, but she added that she had gone on wonderfully well since her operation. Then, on looking into his notebook, Mr. Doran found she was Case II, and there was a report of her death. On further inquiry it transpired that the report referred to some other patient with a similar name and complaint, who had never been under his care. The patient looked very healthy, just as she appeared before the operation, and had distinctly gained flesh. There had been no period since the operation, and the menopause symptoms had passed away soon after her last visit in 1905. On examination, the abdominal cicatrix was found to be perfectly healthy, and the parietes supple. There was no evidence of the existence of any abdominal tumour. The cervix had become very small, and was still fixed, the two fleshy wattles in the left fornix had almost disappeared. There was a little resistance above the left fornix just definable on bimanual palpation. The right and posterior fornices were free. Such was the patient's condition two years and seven months after the operation. Mr. Doran declared that in the whole of his operative experience he had never come across a case where the after-history so thoroughly belied operative and pathological evidence.

These cases show the imperative necessity for careful observation of all patients from whom uterine fibroids have been removed. Only by such observation can we expect to gain anything like accurate knowledge as to the effects on the patient's organism of the removal of the fibroid uterus with or without cervical or ovarian tissue, so that we may see how far clinical experience agrees with the physiological experience of Blair Bell, Bond, Carmichael and Marshall, and others; and only by such observation can we expect to calculate with something like precision the chances of malignant, or apparently malignant, changes being overlooked or misinterpreted.

SOLID FIBROID OF OVARY OBSTRUCTING DELIVERY.

By J. STEWART, M.B., M.Ch., M.A.O.,

LEEDS.

THE following case occurred in a lady married two years, and who was attended by me in her first confinement.

Before her marriage the patient, who was aged 26, had complained at times that she felt something roll about in her abdomen, this being accompanied by sudden faintness and sickness. No opinion could be formed at the time as to the cause of this, but subsequent events made things clear. When called to see her in labour, it was found that there had been pains for two hours. On making a vaginal examination the finger impinged upon a smooth mass, so tender and so exquisitely sensitive that it immediately flashed through my mind, without any attempt at a differential diagnosis, that I was dealing with an ovarian tumour which was being compressed. This smooth tender mass was opposite the right sacro-iliac synchondrosis, and wedged between the brim of the pelvis and the head of the fetus, advancing in front of the latter. The cervix could be felt high up and just within the true pelvis. It was soft, dilatable, and about the size of half a crown. Rectal examination assured me that the mass was not faecal, although that was negatived by the great tenderness present.

Under chloroform the hand was passed into the vagina, the uterus and fetal head pushed to one side, when the tumour gently slid back into the abdomen. With the hand still in the vagina the cervix was dilated, forceps applied, and child delivered. The puerperium was uneventful. Six weeks afterwards I removed a solid fibrous tumour of the ovary, somewhat irregular in shape, and about the size of an orange. It was very easy to remove, there being no adhesions, and a sufficiently long pedicle to allow it being brought to the surface. Convalescence was without interest. The train of symptoms mentioned at the beginning, of something rolling about with faintness and sickness, have entirely disappeared.

Of all forms of pelvic obstruction the most interesting and by far the most frequent is obstruction caused by an ovarian tumour. McKerron gives the frequency of ovarian tumour complicating pregnancy as about 1 in 2,500. The mortality is appalling when Nature is allowed to take its course, the maternal being about 25 per cent. and the infantile nearly 50 per cent. The question of treatment is debatable, and in pursuing the course I did I am afraid

ran counter to the best English opinions. Bland-Sutton says:

When an ovarian tumour is discovered during labour and it impedes delivery, ovariectomy should be performed.

McKerron says:

Ovariectomy is the best treatment, and should be preferred when the patient can be placed under an experienced operator. When time and place does not admit of ovariectomy try reposition.

On the Continent there are two schools—one advocates Caesarean section, and this has the greater following; the other, ovariectomy.

On one point, however, every authority is agreed—never to attempt delivery until the tumour is removed either by reposition, puncture, or ovariectomy. The objections to ovariectomy are (1) great length of incision, because, as a rule, the surgeon has to get the uterus outside the abdomen to get at the tumour; consequently there is (2) great risk to the life of the fetus; (3) the surgeon must return the pregnant uterus, and sew up the abdomen over it.

Puncture is only mentioned to be condemned; it could have been of no use in the case of solid tumour reported here. There is just one possible exception, where the head is well engaged in the pelvis, and there is a cystic tumour low down in front of the head. In such a case puncture, and perform ovariectomy after delivery.

There are two objections to reposition. In pushing back the tumour, if a cyst it may rupture, or the pedicle may become twisted, and, as a rule, a long pedicle is present. As to the first, there is not much risk if gentleness be used. Instead of pushing at the tumour, push up the head of the fetus and the uterus out of the way. As to the second, axial rotation with twisted pedicle, it will be announced by great pain, tenderness and vomiting, accelerated pulse, and rise of temperature. If these should supervene in a case in which reposition had been performed, there should be no hesitation about opening the abdomen. Personally, I would much prefer to open the abdomen after the uterus had been emptied, and to perform ovariectomy, than to do it when the abdomen was crowded with a pregnant uterus.

It is almost too much to ask of human nature not to try and replace, if it can be easily accomplished. By doing so, at the same time emptying the uterus, a difficult situation has been surmounted, leaving the tumour to be dealt with in the near future.

If the tumour cannot be pushed up from the pelvis into the abdomen, then, in spite of the teaching of Mr. Bland-Sutton (and there is no authority whose opinion would carry greater weight), I should not hesitate to perform Caesarean section, at the same time removing the tumour after closing the uterine incision; as these tumours have long pedicles, it would add hardly anything to the operation. By so doing the necessity of an incision from ensiform cartilage to pubis is obviated, the life of the fetus through eventration of uterus is not endangered, and the difficulty of closing the abdomen over a fully distended organ is done away with.

A NOTE ON ABDOMINAL HYSTERECTOMY FOR CANCER OF THE CERVIX, AND ITS IMMEDIATE MORTALITY;

WITH AN ANALYSIS OF SEVENTEEN CASES.

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THE value of statistics of surgical operations is undoubted, yet they are often misleading owing to the predominant influence of the personal factor—the individual skill and experience of the operator. More especially is this true of any modern and extensive operation such as Wertheim has introduced to the profession, and which not many English surgeons have had the opportunity of performing in any large series of cases.

In a recent instructive article by Messrs. Berkeley and Bonney,¹ a table was given of 18 cases with 3 deaths (mortality 16.6 per cent.), a result of which these authors

may be proud; but this death-rate will be undoubtedly lessened in days to come, partly by an increasing wisdom in the selection of cases, partly by further improvement in operative technique and experience.

In presenting a similar table of the cases which have come under my personal knowledge at the Cancer Hospital during the past two years, I wish to acknowledge my indebtedness to the medical committee of the hospital for permission to do so; and I wish strongly to emphasize the fact that the results are drawn from the work of several operators. This is a highly important point.

The massed results of a number of workers have this great value, that they present candidly to those who are not specially experienced in any particular operation what results they may reasonably expect to obtain themselves in their first few cases.

In these 17 cases the mortality works out at 23.5 per cent. This is undoubtedly high, but no higher than that of gastro-enterostomy in its early days—an operation which is now an established proceeding with a low mortality in experienced hands.

The publication of these figures will serve at least one

good purpose if it should act as a warning to prevent the indiscriminate employment of abdominal hysterectomy in inexperienced hands.

In all these cases the diagnosis was microscopically confirmed by Dr. Alexander Paine, Director of Cancer Research and Pathologist to the Hospital.

Of the 17 cases, 4 proved fatal. Of these 4 fatal cases 3 were extraordinarily difficult (Nos. 6, 11 and 13). In No. 6 the growth was infiltrating the posterior vesical wall, the operation was very prolonged and difficult, and was followed by a rapidly fatal peritoneal infection. In No. 11, the uterine disease was complicated by the presence of double pyosalpinx and extensive dense adhesions. The other patient (13) was so excessively stout that only a transverse abdominal incision would give proper access to the pelvis, and I do not think it possible to have recognized beforehand that such extensive destruction of the cervix had occurred that the latter tore right across at the level of the vaginal reflection when the uterus was being drawn over to facilitate the ligation of the left uterine artery. A quantity of offensive cancerous and purulent material escaped into the pelvis.

Analysis of Seventeen Cases of Cancer of the Cervix treated by Abdominal Hysterectomy.

No.	Age.	Years since Menopause.	Symptoms.	Condition of Cervix.	Condition of Glands, Adhesions, etc.; Complications, etc.	Condition of Wound, Healing, etc.	R.=Recovery. D.=Death.
1	53	3	4 months	Growth of cervix just commencing to spread on vaginal wall high up	No adhesions, iliac glands on left side	Some pus in abdominal incision	R.
2	49	2½	2 months	Cervix enlarged and very hard	Uterus enlarged, left pyosalpinx, matting of left broad ligament, adhesions of uterus to rectum	Ditto	R.
3	52	—	3 months	Friable growth	Uterus enlarged, no adhesions, no glands	First intention	R.
4	56	5	Discharge 2 years, bleeding 3 months	Growth of cervix and body	Uterus enlarged. No glands found. (?) Cancer infection of operation area. No adhesions	Ditto	R.
5	50	—	Irregular bleeding ? 3 or 4 years	Cervix very hard	Uterus not enlarged, movable, no glands	Ditto	R.
6	47	—	6 months	Large growth, ulcerating, friable	Infiltration of bladder wall; no other adhesions, no glands	—	D. (septic peritonitis).
7	41	—	7 months	Sprouting friable growth	No adhesions, no glands	—	D. (septic peritonitis).
8	58	14	months	Excavated by growth	Thickening in right broad ligament, right ureter imbedded in growth; portion of bladder wall infiltrated; this was excised, edges sutured and covered with a peritoneal flap; no glands enlarged	Aseptic	R.
9	58	3	2 years, ? 1 year bleeding	Breaking-down growth of cervical canal	No adhesions, no glands, (?) escape of cancer cells at operation	Some suppuration at lower end of wound	R.
10	40	—	4 months	Whole cervix large sloughing, friable mass	No adhesions. Thickening of base of left broad ligament; one iliac gland on left side	Ditto	R.
11	41	—	2 years	Large excavation by growth	Dense adhesions, both tubes distended with purulent fluid, two iliac glands breaking down and ruptured during removal	—	D. (septic peritonitis).
12	43	—	? 2 months	Large growth, which had obstructed labour 5 weeks previously. Bleeding during last 3 weeks of pregnancy. Cervix excavated, perforation during curetting into Douglas's pouch.	Adhesions posteriorly. No glands	First intention	R.
13	54	5	2 years	Prominent ulcerating growth.	(Patient enormously stout; transverse abdominal incision.) Thickening in left broad ligament by growth. Adhesions in Douglas's pouch. Uterus tore across through the growth at operation	—	D. (sepsis).
14	38	—	3 months	Extensive hard friable growth	No adhesions or glands	Pus in abdominal wound. Stinking abscess evacuated per vaginam	R.
15	63	?	1 year	Cervix very hard	No difficulties; no glands	First intention	R.
16	47	—	4 months	Very foul excavated ulcer	No adhesions; no glands	Abdominal wound septic. Abscess in right iliac fossa	R.
17	50	2	2 months	Cervix very hard and granular; bleeds easily	Invasion of left broad ligament involving ureter. Ureter divided, and brought out in left iliac fossa to the skin	First intention	R.

SELECTION OF SUITABLE CASES.

It has been usual to regard with much suspicion any cases presenting evidence of infiltration or thickening in the lateral fornices or Douglas's pouch. But cancer does not only attack the normal pelvis, and a large number of women with old inflammation in the parametric tissues, pelvic peritoneum and Fallopian tubes, develop cancer of the cervix. Unless this is borne in mind a certain number of cases will be rejected which on abdominal exploration would have proved operable. Therefore, in a doubtful case it is good practice to examine, through an abdominal incision, the exact condition of the pelvis by touch and sight.

The question of infiltration of the bladder is far more important as regards the immediate and ultimate prognosis. In any doubtful case a definite opinion as to the advisability of proceeding with hysterectomy can only be given by opening the abdomen and seeing at once how far it is possible or advisable to strip the bladder from the cervix. Messrs. Berkeley and Bonney have pointed out that a wound of the bladder is a serious complication, extremely likely to occur if that viscus is involved in the growth, and very possibly fatal from the prolongation of the operation involved (cf. Case 6). In Case 8, however, a portion of bladder wall was resected, the gap sutured, and covered by a peritoneal flap. The patient recovered. Case 17 shows that involvement of the ureter is not necessarily an indication against the operation. The ureter was brought out in the left iliac fossa, and no bad symptoms ensued.

Pre-existing renal disease is perhaps a more serious complication in this operation than in many other surgical procedures. The handling and extensive dissection of the ureters, combined with the subsequent catheterization so often required, must lead to grave risk of a rapidly-ascending renal infection.

TECHNIQUE.

In reviewing the table of cases, the very striking fact is apparent that out of the 13 cases which recovered 6 developed suppuration in the abdominal incision; 1 in addition had an abscess in the pelvic cellular tissue pointing at the vaginal vault, and another an abscess, probably extraperitoneal, pointing in the right iliac fossa. These cases strongly suggest a technique in which there is room for improvement. Complete resterilization of the surgeon's and assistants' hands should be carried out immediately before suturing the pelvic peritoneal floor and abdominal incision, and for these steps a different tray of instruments should be reserved. The raw edges of the abdominal incision should be protected throughout the operation, as Berkeley and Bonney suggest, by sterilized cloths. At that most difficult and dangerous period of the operation, when the vagina is being divided, too much care cannot be expended on packing off the tissues around so that no cancerous particles or septic material may reach them. At this point I believe that the surgeon's and assistants' hands cannot possibly be any longer sterile.

In the majority of these cases a gauze drain has been pushed down from above into the open end of the vagina, and the cut edges of the latter brought together by suture, but it would seem to be the best practice to use no suture at all; it is in the extensive raw surface left in the sub-peritoneal cellular tissue that infection is liable to occur, and no drainage exit can be too large for this highly dangerous area; it is best ensured by the use of a large drainage tube which keeps the vaginal walls apart as long as may be necessary. A small gauze wick may be placed inside the tube, but if gauze alone be used the vaginal walls must tend to compress it and restrict the drainage. In those cases in which the cervix and vagina remain very dirty in spite of preliminary cauterization, etc., might it not be a certainty that infection of the neighbouring area takes place? Therefore drain freely.

Of the 13 cases which recovered, Nos. 3, 4, 5, 9, 14, 15, 16 could probably have been treated by vaginal hysterectomy; but the rest, either from the presence of infected glands or from adhesions and parametric infiltration, were too advanced for the vaginal route. Two cases have recurrence, one (No. 10) developing a mass in the left side of the pelvis about twelve months after operation, another having a mass in the vault of the vagina within a few months (No. 14). Of the 4 fatal cases, 3 were totally

unsuitable for vaginal hysterectomy, but one (No. 7) might have been so dealt with without loss of life. The abdominal route has therefore a far larger field in the removal or even in the palliation of the disease.

The operation itself would appear to be as complete as can be devised in this particular situation, but practically it is apt to fall short of the theoretical ideal which should govern all cancer operations. This ideal consists in the removal of the primary focus as widely as is consistent with safety together with the lymphatic and glandular area in one unbroken sheet. This ideal is well fulfilled in the modern operation for cancer of the breast—a situation in which it is anatomically possible to carry it out—but to remove iliac glands, parametrium, and uterus in continuity, and to avoid tearing across infected lymphatics is a matter of exceeding difficulty.

The commonly practised step of removing iliac glands after removal of the uterus implies that the lymphatic channels are torn across. The vagina should be divided at the lowest possible limit. It is surprising how the vaginal walls retract even when clamped, and how little of the vaginal wall appears to be removed when the specimen is examined after removal.

One more point is certainly fully deserving of recognition, and for the suggestion I am indebted to Mr. Charles Ryall. Before doing hysterectomy for cancer of the cervix, a sound should be passed into the uterus; this simple precaution may reveal the presence of a pyometra—a serious complication in the operation from the point of view of a sepsis.

REFERENCE.

¹ BRITISH MEDICAL JOURNAL, October 3rd, 1908.

ACCOUNT OF AN EPIDEMIC OF ENTERITIS CAUSED BY THE "LIVERPOOL VIRUS" RAT POISON.

BY

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WITH BACTERIOLOGICAL REPORT

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THE following notes refer to an epidemic, confined to twelve persons, which recently occurred in a large business house in London. All the cases developed between July 18th and July 22nd inclusive. The actual incidence of the cases on each of these days was as follows:

	Cases.
On July 18th	1
On July 19th	7
On July 20th	1
On July 21st	2
On July 22nd	1

The disease was very severe amongst those who were first attacked—and, indeed, for the first day or two the condition of six of the earliest patients aroused the greatest anxiety, though eventually they all recovered. In the later cases the condition was progressively less severe, and in the patient who was last attacked the symptoms were quite mild.

SYMPTOMS.

The symptoms were the same in all cases, and only varied as regards severity. They were as follows:

Vertigo was the initial symptom complained of in every case.

Abdominal Cramps developed within an hour or two after the attack of giddiness, and in most of the cases the abdominal pain was extremely acute. When the first patients, some six in number, were originally seen, on July 19th, they were lying about on beds and sofas, with their knees drawn up, groaning, and obviously suffering very severely. These cramps, gradually becoming less acute, continued in the majority of cases for two or three days. In only one case did they persist for a longer