ureter, or to a coil of the ileum, or be found deeply attached in the pelvis, its removal may be attended with very considerable difficulties. The management of such a case must be left to the judgment of the individual surgeon.

Mr. BENNETT MAY congratulated Mr. Treves on his paper. He thought those American surgeons who advocated operation in all cases of inflammation in the right iliac fossa failed to discriminate the importance of differentiating cases. He (the speaker) thought the first thing to do in any case was to try to discriminate those of perforation or disease of the appendix. In these operation would sooner or later be necessary, and had better be sooner. In the others, recovery was the rule without operation. Of course, the discrimination was not easy, but Mr. Treves had emphasised the principal differential features. In operating Mr. May did as little as possible. Having reached pus he simply inserted a drainage tube, and made a very limited search for appendix or foreign body. In three cases a foreign body had been carried into his hand by the escaping pus, or the appendix had presented itself with a foreign body partially extruded. He had simply ligatured and cut this off with success. In one case he had had free bleeding from an ulcerative lesion of an ileo-colic vein, caused by a stone which had perforated the cæcum.—Dr. EASTES mentioned a case of typhilitic abscess in which he was called in consultation about four years ago, in which the fluctuation could be detected above the crest of the ilium as well as in front of the abdomen. A deep incision was therefore made an inch and a half behind the anterior superior spinous process, and the abscess reached, washed out, and drained with a glass drainage tube, which was removed at the end of a week. Recovery took place in three weeks. The case was narrated to show how very simple the necessary operation might be in some cases.—Mr. LAWFORD KNAGGS mentioned a case in which a perityphlitic abscess was opened and a separated intussusception was found lying in the abscess cavity. The patient, a young soldier, made a good recovery.—Dr. MEAD (Newmarket) mentioned a case in which there were repeated attacks, beginning at 9 years of age, in a lady who was troubled at intervals varying, with one exception of about ten years, from three to four years. Ultimately, a very serious attack occurred in her 47th year, from which, however, she recovered, but in her 51st year another attack proved fatal. Much serious consideration was given during the attacks and subsequently to the advisability of an operation, but this was negated by all who were consulted.

ABDOMINAL AND OTHER CAPITAL OPERATIONS PERFORMED DURING PREGNANCY.

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THE occurrence in my practice of five cases in which I have found it necessary to perform a serious operation during the course of pregnancy, which has in none of the patients caused premature expulsion of the uterine contents, led me to think that a report of the cases might prove of interest.

CASE I. Fibroid of Cervix Uteri removed in the Seventh Month of Pregnancy.—In February, 1886, I received a letter from my friend Dr. Black, of Harrogate, asking me if I would remove a large polypus of the uterus in a woman, aged 30, seven months advanced in pregnancy, as he feared that if the tumour were not removed, labour could not be effected through the ordinary channel.

She was admitted to the infirmary on February 9th, when she gave the following history: That she had had six children, the last twins, two years previously; that one month after confinement she suffered from what she supposed was "a falling of the womb," which was replaced and kept in position by a pessary. She had been quite regular in her menses until August, 1885, when she became pregnant. In September she noticed a swelling protruding from the vagina, and consulted Dr. Black, who replaced the protruding mass, and told her the nature of her ailment, advising its removal. She suffered from time to time from an offensive vaginal discharge.

On admission the vagina was occupied by a rounded mass the size of a small cocoa-nut, which was attached to the whole of the anterior lip of the cervix uteri; the os being represented by a slit

high up on the posterior aspect of the tumour very difficult to reach. The posterior lip seemed quite free. The abdomen presented the ordinary signs of a six to seven months' pregnancy. There was a constant offensive blood-stained discharge exuding from the vagina. The tumour was quite distinct from the urethra, but the mucous membrane began to be reflected over it half an inch behind the point where the urethra ended in the bladder. The patient was otherwise in fair health.

Operation, February 25th.—The vagina having been well syringed with a sublimate lotion (1 in 4,000) thrice daily for two days before the operation, the patient was put under ether, and placed in the midwifery position. A Sims's speculum having been placed in the vagina, a good view was obtained of the posterior surface of the tumour, which was drawn down with vulsellum forceps. The urine was drawn off by a silver catheter, which was turned round so as to distend the posterior wall of the bladder. The mucous membrane between the bladder and the tumour was incised, and the base of the bladder separated from the growth. Into this groove was passed the wire of a galvano-éclaseur, which was then pushed up until it completely embraced the anterior lip of the uterus, when the battery was connected, and the mass cut away. Although the galvano-cautery had been used, there was considerable hæmorrhage, which required the application of several ligatures to arrest it. The bleeding having been arrested, the vagina was again syringed out with sublimate lotion. On examination the tumour was found to be a fibromyoma, growing in the anterior lip of the cervix uteri, and having a complete capsule.

The patient had neither pain, retention, nor discomfort of any kind; there was a little serous discharge for a few days. When examined on March 6th the wound appeared to be perfectly healed, and the os uteri seemed to be in a normal position. The temperature throughout was never above 99°. The vagina was syringed twice daily with weak sublimate lotion.

On May 3rd Dr. Black wrote to say that the patient was perfectly well, and had not miscarried; that on vaginal examination the cervix and os uteri felt quite normal, so that no one could have told that an operation had lately been performed; the os was a little patulous, and through it the foetal head could be easily reached.

On May 6th Dr. Black sent me word that the patient had been safely delivered of a healthy child at the full time, the labour being perfectly normal.

CASE II. Carcinoma of Breast; Amputation in Third Month of Pregnancy.—Mrs. S. came under my care in 1887, for a rapidly growing tumour of the breast which, having only been noticed two months, had increased with great rapidity during the three weeks before I saw her, when the breast was extensively involved and the axillary glands were enlarged. She was three months pregnant. A colleague who saw the case agreed with me that the wisest course would be to operate at once, as to wait for six months would mean to put aside all chances of cure. Amputation of the breast was performed, together with complete removal of the glands in the axilla, the operation being done antiseptically but without the spray. Recovery was uninterrupted, and healing occurred by first intention, without pain, fever, or discomfort of any kind. The pregnancy proceeded to the full time, and I have reason to believe that the patient has had no return of the disease.

CASE III.—Multilocular Ovarian Cyst with Extensive Adhesions to Uterus; Removed in Tenth Week of Pregnancy.—Mrs. S., aged 37, was sent to me in February, 1888, by my friend and late house-surgeon, Mr. Ambrose Atkinson, as a case of rapidly growing abdominal tumour, probably complicated with pregnancy. The history given was that the abdominal swelling had been noticed for fifteen months, at first small, but afterwards rapidly enlarging. Its growth had been accompanied by severe pain in the abdomen and back. The menses had been perfectly regular. On admission there was a large, rounded, fluctuating, and freely movable swelling occupying the hypogastric and adjoining parts of the iliac and umbilical regions. To the left of, but below the umbilicus, there was a small, hard, rounded nodule, afterwards made out to be a fibroid of the uterus. Examination, *per vaginam*, revealed a soft velvety os with a developed cervix. The uterus was felt to move with the tumour as if the two were intimately blended.

The ordinary operation of ovariectomy, so far as the emptying of the cyst, was performed with full antiseptic precautions, including the spray. On withdrawing the cyst, after emptying as far

as possible, the tumour was found to be very firmly adherent to various structures in the pelvis, including large and small intestine, but more particularly to the back of the uterus. By dint of careful manipulation, the adhesions were separated, leaving a large raw surface on the back of the uterus. The bleeding, which was somewhat profuse, was arrested by sponge pressure. On examining the uterus, it was found to be pregnant (probably about ten weeks), and from its anterior surface a small rounded pedunculated fibroid was springing. This was not interfered with. On account of the extensive adhesions it was considered advisable to insert a glass drainage-tube, which was emptied once in twelve hours until the end of the second day, when it was removed. After the operation the vagina was syringed out thrice daily with salufer lotion (twenty grains to the pint) during the first week, so that if abortion ensued, there would be no risk of septicity.

The patient recovered without a bad symptom, there being an entire absence of pain and distension, and no vomiting after the first few hours; the wound healed by first intention, and the stitches were removed on the seventh day; she was allowed to be up at the end of three weeks, the cicatrix being supported by adhesive plaster. The tumour proved to be a proliferous multilocular cyst, with a large amount of solid growth that seemed to have perforated the true cyst wall and invaded the peritoneum, thus causing the extensive adhesions, and the free hæmorrhage when they were broken through.

In July, Mr. Ambrose Atkinson sent me word to say that he had attended the patient in labour, from which she had made a good recovery.

CASE IV. Strangulated Femoral Hernia operated on in the Third Month of Pregnancy.—On June 23rd I was asked by my friend Dr. Purdy, of Woodlesford, to see a case of strangulated hernia with him, with a view to operation, when he gave me the following history of the case. That Mrs. H. had had two previous pregnancies, and had always suffered very severely from vomiting; that during the present pregnancy, which had advanced three months, she had vomited more or less every day. The sickness had been so severe on June 21st as to lead her to seek medical aid.

On the 22nd she incidentally mentioned that she had a small swelling in the left groin, which, on examination, proved to be a strangulated femoral hernia. On the 22nd the vomiting became stercoraceous, and on the 23rd I saw the case with Dr. Purdy. The A.C.E. mixture was administered by Dr. Purdy, and the parts having been thoroughly asepticised, the hernial sac was opened, and a small knuckle of bowel was found to be tightly nipped by a very small femoral ring, which required division before the contents of the sac could be reduced. The sac was then surrounded by a catgut ligature and excised.

The patient made an uninterrupted recovery, but although the stercoraceous vomiting at once ceased, the pregnancy sickness continued as before. The patient did not miscarry, and is, I believe, going to the full term.

[*Later Note.*—Dr. Purdy writes to inform me that Mrs. H. was safely delivered at the full period of pregnancy.]

CASE V. Rotation of Ovarian Tumour in Second Month of Pregnancy, causing Acute Symptoms; Ovariectomy; Recovery without Miscarriage.—Mrs. A., aged 25, was seen for the first time by my brother, Mr. Herbert Robson, on July 7th, when she gave the history that she had been married two months, and that although she was not strong before marriage, so far as she knew she was otherwise well. At the time of her marriage her menses had just ceased, and the periods had not since recurred, but she thought she was not pregnant. After a rather free supper on July 7th, she was seized with a pain on the left side of the abdomen opposite the umbilicus, which she thought to be colic, and which had to be relieved by a morphine injection. My brother noticed that the abdomen was larger than natural, and suspected the presence of a tumour. Although the pain was severe she was not faint.

On July 8th we found a fluctuating abdominal tumour reaching to within an inch and a half of the umbilicus. The swelling was dull on percussion, and was surrounded by resonance. There was no marked tenderness over the abdomen, and the veins were not enlarged; the most careful auscultation failed to elicit the signs of a fetal heart or of a placental *souffle*. The os uteri was soft and velvety, and the cervix was elongated. The tumour and the uterus moved together. Between the 8th and the 14th of July the patient had two attacks similar to the first, though not so severe.

On July 14th the dulness had reached to the umbilicus, but the flanks were quite resonant.

On July 15th the acute pain returned, and had to be relieved by morphine.

On July 16th the dulness had reached to 2 inches above the umbilicus, where there was marked tenderness. Fluctuation could be distinctly felt across the abdomen, but it appeared to be less defined and more diffuse. It had been explained several days before that an operation might be called for at any moment; but now that the symptoms were becoming more severe, and the patient was manifestly running down, the pulse being persistently 100 or more, permission to operate was asked for; but before operating we asked Mr. Pridgin Teale if he would see the case with us, and he agreed that laparotomy was urgently called for.

On July 17th, my brother administering the anæsthetic, Mr. F. H. Mayo and Mr. Moynihan assisting in the operation, and Mr. Teale being present, I opened the abdomen by an incision of 2½ inches. Free bleeding occurred from the abdominal walls, and on reaching the peritoneum a dark fluid showed through. On opening the peritoneal cavity about a pint of dark coffee-coloured fluid escaped, exposing a multilocular tumour of the left ovary, which had rotated from left to right, twisting the pedicle, and partly strangling the tumour. The pedicle was ligatured by the Staffordshire knot, cut, and the peritoneum carefully dried. The wound was closed by silk sutures. The cyst contained nine pints of fluid. The pulse, which before the operation had been 108, was found immediately after to be 112. No sickness followed; the temperature never rose above 99°. The catheter was never employed. The sutures were removed on the seventh day, when the wound was found to be healed. The patient had no pain; she was up on the fourteenth day, and went to the seaside at the end of a month. Since the operation she has gained a stone and a half in weight, and is better in health than she has been for a considerable time. The pregnancy appears to be following a normal course.

REMARKS.—To the best of my recollection these are the only cases in which I have performed a serious operation during the course of pregnancy, and in no case has miscarriage followed; this I attribute primarily to the absence of pain, and the lessening of shock during the operation by the use of anæsthetics, and secondarily, to the entire absence subsequently of any wound complication such as tension, pain, or fever, owing to the strict observance of antiseptic methods.

In no case was any sedative required or given, and in all the cases the wound healed by first intention. Although the operations were serious, and in Cases I, III, and V involved extensive interference with the uterus or its appendages, there was not the slightest uterine action set up.

The hernia case is also of interest, because of the vomiting of pregnancy gradually merging into that of strangulation, but without much local pain to attract attention to the affected part. It shows the need of careful examination in severe pregnancy sickness.

In the breast case to have waited was to have condemned the patient to death, for I think it has been clearly made out that carcinoma of the breast grows rapidly during pregnancy, whereas the removal did not produce abortion, and has probably resulted in the cure of the patient. In the uterine fibroid case I think it would have been impossible to have delivered *per vias naturales*, and the removal of such a tumour during labour would, I think, have been an extremely dangerous procedure. The period at which the operation was performed (at the seventh month) would seem to show that, even so late in pregnancy, the uterus is a very tolerant organ.

The rotated ovarian cyst is, perhaps, the most important case in the series, and might be worthy of separately recounting, even if pregnancy had not complicated the case. Those who saw the patient would, I feel sure, agree with me when I say that her appearance of extreme illness gave a not very hopeful prospect of recovery; yet she not only recovered, but having now attained the sixth month of pregnancy is in better health than she has been for many months.

Hitherto it seems to have been a matter of chance whether the patient would or would not miscarry after an operation during pregnancy. May we not hope that by the use of antiseptics, as well as anæsthetics, we may operate on such cases with a greater certainty of success?

[*Later Note.*—Mrs. A. was safely confined of a girl in February, 1889.]