THREE CASES OF RUPTURED UTERUS TREATED BY ABDOMINAL SECTION AND SUTURE.

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THE following cases were admitted into the hospital under the care of Dr. Champneys, and transferred to me for operation. For the excellent notes I am indebted to Dr. H. Williamson and Mr. Harold Wilson during their terms of office as Intern Midwifery Assistants at St. Bartholomew's:

CASE I.

A. E. P., aged 44, a multipara, was admitted on the morning of August 14th, 1898.

History of Present Illness.

The child (a vertex presentation) had been born with the membranes intact, a somewhat diffuse placenta being spread out over the fetal head, so that the case was one of placenta praevia. The patient, when first seen, was bleeding freely from the vagina. She was admitted into hospital two hours later.

Condition on Examination.

The general condition was bad; she was much collapsed and sweating freely, but did not complain of any pain. There was marked anaemia. The pulse was 150, and small; the temperature subnormal. A hand introduced into the uterus found intestines and omentum in its cavity, and a large rent in its right lateral aspect. There was movable dullness in both flanks, but no actual external haemorrhage at this time.

Operation.

The abdomen having been opened in the middle line by an incision 5 in. in length, the peritoneal cavity was found to contain a very large quantity of recent blood, which was derived from an extensive tear in the uterine wall. The rent, which was situated on the posterior aspect of the organ, close to its right lateral margin, included the entire length of the cervix, passing upwards for a couple of inches or so into the lower uterine segment and downwards into the upper aspect of the vagina. The raw surfaces were oozing freely. The uterus was brought up into the wound and the rent repaired by three silk sutures passing through the entire thickness of the muscular wall. After the peritoneal edges of the tear had been approximated with fine silk and the pelvis thoroughly sponged out, it was thought advisable at the time to irrigate the general peritoneal cavity with hot sterile water, and the abdomen was then closed as quickly as possible. Unfortunately the patient stood the operation exceedingly badly, and collapsed on the table immediately after the last suture had been inserted.

Necropsy.

Post-mortem examination verified the condition of affairs found at the operation, and in addition many of the organs, especially the liver and heart, were seen to be in a state of "fatty degeneration." On section, the uterine wall showed evidence of considerable fatty infiltration of the muscular fibres.

CASE II.

A. C., aged 34, a multipara, was admitted June 23rd, 1905. She had had six children (twins in 1904) and one miscarriage. All previous labours had been uncomplicated.

History of Present Illness.

Labour began at 8 p.m. June 21st. She was attended by a midwife, who diagnosed a breech presentation. The pains were strong and frequent. At 3 a.m. on June 22nd she was suddenly seized with a severe tearing pain in the right side of the abdomen. She began to bleed a little and felt faint; the pains ceased. At 10 a.m. on June 23rd a medical man was called in. He found a foot presenting and no pains; a leg was brought down, and after a short interval a dead child was delivered easily. The placenta quickly followed, and then a hand introduced found coils of intestine in the vagina.

Examination on Admission.

At 2 p.m. on June 23rd the general condition was good—there were no signs of anaemia or distress; the pulse was 92, full and regular; the temperature 101°; the abdomen was somewhat distended and resistant, and movement below the umbilicus was restricted. On the left of the hypogastrium, reaching almost to the navel, was a rounded body like the contracted uterus; both flanks were resonant. The cervix was widely dilated. A rent $2\frac{1}{2}$ in. long was found running upwards from the os externum, and involving the right vaginal fornix. Coils of intestine were protruding through this, but after irrigation with weak biniodide solution, it was found possible to replace them in the abdominal cavity.

Operation.

The abdomen was opened by median incision. The peritoneal cavity contained a good deal of recent blood and clot,

and the uterus was found well contracted, but ruptured on its right postero-lateral wall, between the layers of the broad ligament. The tear, which was about 4 in. in length, affected the whole thickness of the uterine wall, and extended from the vaginal fornix, which was involved, upwards to nearly the site of origin of the Fallopian tube. In a line corresponding roughly in extent to this, the anterior layer of the right broad ligament had also given way. The caecum and several coils of small intestine, which were found prolapsed through the rupture and partially strangulated, were withdrawn into the abdomen; they appeared reddened and injected. The patches of degeneration were seen on the torn surfaces of the uterine muscle, and the wall of one considerable sinus was exposed, although no active haemorrhage was going on at that time.

There was a large quantity of blood clot between the two layers of the torn broad ligament, and blood had forced its way beneath the peritoneum covering over the lower uterine segment, marking out clearly the line of firm peritoneal attachment.

The edges of the tear were brought together by strands of No. 2 silk passing through the entire thickness of the uterine muscle, and the interior of the uterus having been drained vaginally by a rubber tube, the sutures were tied. A few fine silk sutures were also inserted, and the torn anterior layer of the right broad ligament was fixed to the peritoneal edge on the right margin of the uterus by several Lembert sutures. The peritoneum was sponged out and the abdomen closed.

After-history.

The patient made a perfect and uninterrupted recovery; an examination was made on July 21st. There were no signs of contracted pelvis. The fundus of the uterus was freely movable at the pelvic brim. In the right lateral fornix, stretching outwards and backwards from the cervix, was a scar in the vaginal roof.

CASE III.

C. H., aged 36, a multipara, was admitted on January 31st, 1906. She had had seven children and two miscarriages; previous labours had been easy.

History of Present Illness.

Labour commenced early on the morning of January 30th. She was attended by a midwife in the earlier part of labour. At 6 p.m. the pains became more intense; at 9.30 p.m. she experienced a sudden severe pain, and no subsequent pains, and became collapsed. At 9.45 p.m., when first seen, the head was on the perineum. Extraction by forceps was easy. The child was dead. (Presentation = vertex (L.O.A.)) Intestines were found in the vagina.

Examination on Admission.

She was admitted into hospital at 12.30 a.m. on January 31st. The general condition was fairly good; she was pale and restless, the pulse 100, was of fair volume and tension; the temperature 98°.

The abdomen presented a peculiar keel-shaped appearance, with a vertical ridge in the linea alba. There was considerable flatulent distension, movements were impaired, and there was general tenderness; the uterus was not palpable. The right flank was dull, but the dullness was not affected by position.

There was no external haemorrhage; the cord was hanging out of the vulva, the external os was rigid, only admitting two fingers.

Chloroform was administered, and the external os was dilated digitally until the hand could be passed into the uterus, which was found well contracted and empty, with a large rent on its right anterior aspect. The cord was then made taut by an assistant, and the hand passed easily through the tear. By following the cord the placenta was localized in the right hypochondrium; it was seized laterally, delivered, and the uterine cavity and rent packed with gauze.

Operation.

Later the abdomen was opened in the middle line. A fair amount of free recent blood was found in the peritoneum, and the uterus was at once seized and partially delivered through the wound. It had a large tear extending from immediately below the fundus to the neighbourhood of the internal os. This rent commenced on the right anterior aspect of the organ, passed downwards and outwards to the right uterine margin, and then vertically downwards through the substance of the blood-infiltrated right broad ligament. The uterus was contracted, and the edges of the rupture much everted, so that a good area of mucous membrane was exposed to the abdominal cavity.

The packing from the uterine cavity having been removed, the rupture was rapidly repaired by eight No. 2 silk sutures passing through the entire thickness of the muscular wall, care being taken to invert the edges as the sutures were tied. After a few fine silk sutures had brought the peritoneal aspect into close apposition, all obvious blood was sponged out of the pelvis and the abdomen closed.

After-history.

The patient made a complete and uninterrupted recovery. There was no contraction of the pelvis.

Rupture of the uterus is comparatively rare. The

three cases recorded are the only ones admitted into the women's wards, St. Bartholomew's Hospital, during the last ten years.

It has been stated that such an accident may be recovered from without surgical interference. This may be true occasionally; indeed, there is scarcely an accident to the human body however severe that may not be survived.

As regards rupture of the uterus, the point is whether the patient has a better chance with or without an operation. Undoubtedly in Cases I and II the patient would have had no chance; in both cases a considerable amount of intestine had prolapsed into the uterine cavity, and then, owing to the contraction of the muscular walls, had become hopelessly strangulated.

In Case III at least a fourth of the mucous membrane of the uterus was everted through the laceration, and therefore would have prevented the spontaneous closure of the rent. The desirability of operating promptly after the accident has been discovered is shown in the cases recorded.

The first case had been left so long that the patient had not sufficient vitality left, and died on the table. The two other cases, operated on earlier, did well, giving no anxiety. The first case was operated on ten years ago, at a time when the cleaning out of all debris and blood clot was considered essential; such a "toilette" is not necessary, and certainly should not have been undertaken in the patient's collapsed condition. In recent years I hardly ever wash out or use a drainage tube, experience showing that blood left in the abdomen does little or no harm.

THREE CASES OF TUBAL PREGNANCY.*

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CASES of tubal pregnancy are not very uncommon. In the course of fourteen years' attendance on hospital practice I have seen 20 examples in addition to the 3 recorded below, and know of at least 6 other cases occurring in the private practice of my friends.

Pain and haemorrhage are usually the first indication that there is anything amiss, consequently it is not the surgeon but the general practitioner who first arrives on the scene, and on whose recognition of the gravity of the case the life of the patient frequently depends.

The following cases markedly contrast with each other, and illustrate three of the recognized conditions which may be produced by rupture of or haemorrhage from a pregnant tube:

CASE I.

History.—A woman, aged 24, was seen in consultation with Dr. R. H. Clay. She had been married seven years. There were two children, aged 6 and 5 years, and no miscarriages. Menstruation had been regular for five years up to thirty days before the date of the consultation, when the period due failed to appear; eleven days previously she suffered pain in the vagina and rectum; eight days previously the pain increased, and a little blood was lost per vaginam; four days previously diarrhoea occurred, with the passage of a few blood clots by the vagina; one day previously the diarrhoea was accompanied by pains resembling those of labour.

Diagnosis.—When first seen in the morning the abdomen was slightly distended and tender, with an indistinct sense of resistance above the pubes. It was resonant except in the flanks, where dullness, not affected by change of position, was most marked on the left side. On vaginal examination the uterus, of normal size, was found low down, close behind the pubes. The cervical canal was closed. In Douglas's pouch was a smooth, very tender, mass, resembling an ovary. The rest of the pelvis felt full and boggy. On rectal examination the same boggy mass was felt. The upper rectum was constricted. The lips were somewhat anaemic. The pulse was 110, and the temperature 101°. A diagnosis was made of rupture of a pregnant tube, with coagulation of the effused blood.

Operation.—When seen later at 9 p.m. abdominal pain was very severe, and not relieved by morphine; the lower abdomen was much more distended. The temperature was 103°, and the pulse 134. The face was drawn, and the breath had the sweet smell frequently associated with sepsis. I considered that the blood in the abdomen was becoming infected, and that possibly a fresh haemorrhage was taking place, and therefore decided on immediate operation. At 1 a.m. I opened the abdomen by an incision 6 in. long through the right rectus. The omentum

and small intestines were partly adherent to the pelvic contents. On separating these adhesions handfuls of dark clot and fluid blood appeared. The right ovary and Fallopian tube, which was ruptured at its centre, were removed. At this stage the anaesthetist reported that the radial pulse had disappeared. The omentum had several clots incorporated with it, as had also the rectum and uterus. These clots were so adherent that they were left. Before tying the last suture in the abdominal wall, 5½ pints of warm saline solution were poured into the abdomen through a funnel and tube. This improved the patient slightly, but failed to restore the radial pulse. No superficial vein being visible, the venae comites of the right brachial artery were exposed in the middle of the arm. These veins were so small that it was impossible to introduce a cannula. The incision was then prolonged up to the fold of the axilla, where the veins united, and into this vein 8½ pints of hot saline solution, with 1 oz. of brandy, were injected.

After-history.—The patient had no sickness, slept fairly, and passed 1 pint of urine during the night and 4 pints of urine in the twenty-four hours following operation. Recovery was steady, the pulse rapidly slowed, and on the twenty-fifth day was 78. Recovery may be attributed to the large amount of fluid injected, 1½ gallons in all, which in the first place relieved shock and afterwards enabled the emunctories, especially the kidneys, to dispose of the poison, and to the very able assistance which enabled me to complete the operation, which was performed in a small cottage, in just over the hour.

CASE II.

History.—The patient, a married woman, aged 23, was seen in consultation with Dr. C. P. A. Mariette. She had two children. She had missed her last period. Thirty-six hours before being seen, shortly after taking a dose of salts, she was seized with abdominal pain, faintness, and convulsions.

Diagnosis.—When seen the patient was found blanched, with a distended abdomen, and a thready pulse. A diagnosis was made of rupture of a pregnant tube, with haemorrhage into the general cavity of the peritoneum.

Death.—Immediate operation being imperative, this was commenced at 10 p.m. A minute quantity of chloroform and ether was given, followed by infusion of saline solution and strychnine into the right brachial veins, preliminary to coeliotomy, but death took place soon after the commencement of the infusion. No abdominal incision was permitted.

CASE III.

History.—This patient, seen in consultation with Dr. J. J. Blagden, was a married woman, aged 34. She had one child 5 years old, and no miscarriage. She had passed through two attacks of rheumatic fever. The patient complained of a painful swelling in the left side of the abdomen. The last period took place five months ago. Eleven weeks ago she was taken suddenly ill with shivering, accompanied by pain in the left iliac region. This was attributed by the patient to a chill. She saw a medical man, who is reported to have told her that the womb was displaced, and that she must lie in bed in one position for three weeks. At this time, having previously been regular, she had missed three periods. After a week or two a tumour was noticed in the left iliac region; the swelling became large and tense, so that extension of the left leg caused pain. Six weeks ago something seemed to burst, and for twenty-four hours there was a large flow of blood from the vagina. The loss of blood then ceased, and the iliac swelling was noticed to have almost disappeared. Her then medical attendant called another medical man in consultation, as the result of which the patient states that she was told that she had a pregnancy outside the womb, but fortunately this pregnancy had been discharged through the womb. The patient had been up on a couch daily, and a week ago had gone out for a drive. During the last fortnight the tumour had again increased in size and was larger than before. The patient, who was becoming weaker, suffered severe pain. At this time she changed her medical attendant and called in Dr. Blagden.

Diagnosis.—The temperature was normal and the pulse 90, of fair volume and tension. Nothing abnormal was discovered in the heart. On the left side, rising from the pelvis to the level of the umbilicus and extending 2 in. to the right of the middle line, was a tense rounded tumour, the size of a coconut, tender on palpation, and giving a thrill and dull note on percussion. On vaginal examination the uterus was found to be pressed downwards and to the right by a globular swelling apparently continuous with the mass in the abdomen. A diagnosis was made of rupture of a pregnant tube with continued development of the pregnancy, probably between the layers of the broad ligament.

Operation.—In view of the increasing weakness and continued pain operation was decided on. An incision 6 in. long through the left rectus was made over the most prominent part of the tumour. The divided tissues were extremely vascular. The distended, very tense broad ligament was exposed. In the right side of the pelvis the softened uterus was felt enlarged to twice its normal size. The broad ligament was incised, the placenta being on the surface of the tumour; this incision extended through the placenta. Liquor amnii escaped freely, and a living fetus of 4½ to 5 months' development was extracted, the cord being ligatured and dropped back in the sac, which was then packed with gauze. Haemorrhage

* Being part of a paper read before the South-Western Branch of the British Medical Association.