INGUINAL HERNIA OF UTERUS:

HERNIOTOMY WITH RADICAL CURE: UNUSUAL COMPLICATIONS: RECOVERY.

By RUSHTON PARKER, M.B., B.S., F.R.C.S.,

PROFESSOR OF SURGERY IN THE UNIVERSITY OF LIVERPOOL.

A LADY, aged 47, was brought to me in October, 1907, by Dr. Prichard, of Conway, for double inguinal herniotomy. The right hernia had existed many years, but had only been troublesome four or five, and had become constantly painful. During the past fortnight symptoms of obstruction had occurred, lasting three days. The left hernia had formed gradually, and had never given trouble. Both felt like, and were supposed to be, omental ruptures.

On October 19th, 1907, double herniotomy was performed in a home in Liverpool, with the aid of Dr. Prichard and an anaesthetist. The right hernia was found to contain an ovary, Fallopian tube, broad ligament, and a small, elongated uterus, which at the moment was taken for the right half of a "bicornis," all enclosed in a peritoneal sac. There was no means of reducing the contents, which were accordingly removed. In doing this careful search was made for a portion or trace of vagina, but none was found, either then or after dissection, of the specimen. But the finger was passed into the vagina, at this stage of the operation, without obstacle, and without any discovery of note. The stump was stripped in detail with dissecting forceps and the shreds tied and returned into the abdomen. The hernial sac was stripped, closed with a Staffordshire knot, and cut off beyond. On the left side the contents were omentum, the narrow neck of which was tied and its stump returned. The hernial sac was closed as on the right side, the pillars of each ring closed, and the wounds sewn up. Both wounds healed by first intention in three days and the herniae continue

soundly cured. But the patient became uneasy as soon as she recovered from the anaesthetic—that is, the same afternoon—complaining of continual abdominal pain and inability to pass wind, with slight but increasing distension. She could not sleep, and got no relief from several doses of opium with abstinence from all food of any kind.

By the fifth day, October 23rd, she was so decidedly worse that median abdominal section was performed, and Dr. Prichard came over for the purpose. Attached to and blocking the sigmoid flexure there was found a hard lump resembling and taken for a small carcinoma, all the gut being distended above this point.

As a special precaution, and to avoid contamination of the parts before closure, a loop of bowel, with the lump superficial, was closely sewn to the peritoneum, and its contiguous sides attached to each other, in the middle of the opening; the abdominal wall above and below being closely sewn with detailed suture of the aponeurosis; and, finally, the gut opened above the growth, and a wide glass tube tied in, so that faeces were conducted away outside the dressings, without leaking into the wound. Before attaching the gut or in any way closing the abdomen, careful search was made in the pelvis for the left ovary and appendages, and for the left half of the supposed "uterus bicornis"; but nothing whatever could be found of such parts. On attempting a vaginal examination during this operation the finger could not be passed more

than an inch or little more, that tube being now tightly closed at that distance from the vulva. These discoveries were mysterious at the time, and have since not yielded any explanation.

No further symptoms of bowel obstruction occurred; the patient became, however, very excited, and at times almost unmanageable, owing to restlessness and frantic complaints of pain. So hypodermic injections of morphine sulphate were resorted to, usually three times daily, but often less, in doses that had to be increased until the quantity would have alarmed me were it not that I could not manage with less, though frequently diminishing it secretly. The necessary relief was always obtained, although often postponed by cutting the doses short. Nobody but myself administered the drug, or knew the dose given, and it would serve no useful purpose to mention the quantities. No other drug was ever combined with it, and so its exact and real value were always perfectly clear. This process was kept up for four and a half months, not a week passing without many attempts by postponement and diminution to make her do with less. In a fluctuating way these efforts succeeded, but her suspicions were never aroused. The drug was only at first progressively increased. The maximum doses were quickly arrived at, and, once reached, had never to be exceeded.

In a very few days after this second operation the tube separated, and the faeces leaked from the fistula thus made, but were kept from the sewn parts of the wound by interposing folds of cyanide gauze plentifully smeared with eucalyptus ointment. These parts of the wound healed quickly and well, but still the faeces irritated portions of the skin around, and also caused a partial reopening of the right inguinal wound for a time. However, with firmer ointments, medicated with boric acid or eucalyptus oil as found convenient, these inconveniences

Contents of right inguinal hernia, consisting of small uterus (with fibroid in cervix), right Fallopian tube, broad ligament, and ovary flattened out and thinned by pressure while lying under other specimens. (Photograph in water, after 16 months in formal solution, by Fred. Halliday, Museum Attendant.)

were gradually overcome, and the faecal odours counteracted, between the changes of dressing, by pads of odoriferous carbolic tow and sprinklings of lavender water.

Exactly two months after the colostomy a third operation was undertaken. As the patient had begun to hold her ground, though much reduced in flesh, and was becoming frantic at the prospect of a permanent faecal fistula, the parts were examined in consultation with Mr. F. T. Paul, with the view of removing the growth on the colon. Its situation had receded, and enemata given by the rectum immediately welled out of the fistula. After clearing the rectum, which had gradually accumulated faeces, enemata were given both ways, and the agreeable and unexpected discovery made that the finger revealed smooth bowel in both directions from the fistula, and no trace of tumour. There was a good spur of bowel behind its attachment round the fistula, so the future proceeding was evidently much simplified; and on December 23rd, 1907, the spur was compressed in a clamp which cut its way gradually through after tightening a screw on the handles, and came away in little over a week, and faeces were found to be reaching the rectum, though most passed by the fistula.

On January 9th, 1908, a fourth operation was done, bringing the edges of the skin by deep mattress sutures, and superficial stitches over the fistula. In three days

faeces leaked out, but the stitches were left in for three weeks and the parts cleansed by daily irrigation. Five weeks later she passed a voluntary stool, in the sitting posture, and daily afterwards, when the leakage became obviously less in three more days. After six weeks she sat up daily, the morphine was much reduced, unknown to her, and less than a week later she volunteered to go without it, and it was then abruptly discontinued. A week later (March 13th) she went home, took her nurse with her, and final healing occurred by the end of that month. Gradual improvement took place, resumption of ordinary diet, carriage exercise, and open-air life in house or garden.

Some violent attacks of abdominal distension and constipation occurred, through reckless feeding; but were corrected by enforced fasting and rest in bed. It had to be impressed upon her that owing to the attachment and probable stricture or other deformity of the bowel, she would have to practise great frugality to avoid imminent danger.

By August, 1908, she was perfectly well, and at Christmas she went from home on a visit of several weeks, being in full health and vigour, with firm scars at all the sites of operation; and no impulse in the groins or any trace of hernia, but still a closed vagina.

BIBLIOGRAPHY.

BRITISH MEDICAL JOURNAL, February 27th, 1909. Professor D. J. Cranwell, of Buenos Aires. Macready, *Treatise on Ruptures*, 1893, pp. 162-4. Cruveilhier, *Anatomie Pathologique (folio) Lévasson*, 37, Pl. 6 (showing a similar ulcer, but in a left femoral hernia.)

CAESAREAN SECTION WITH UNUSUAL INDICATIONS.

By R. C. BUIST, M.A., M.D. DUNDEE,

LECTURER IN CLINICAL OBSTETRICS IN ST. ANDREWS UNIVERSITY.

ORDINARILY a Caesarean section is looked forward to as one of the possibilities of a particular case, and preparations for it are made in due course, but in the case which I am to narrate, until I was actually in immediate presence of the need, I had no thought that delivery in this form might be called for. As there were none of the classical indications and the ordinary conditions of election for its performance were all violated, the notes of the case may have interest for members of the profession not in special practice.

Mrs. M., aged 46, was seen by me on September 20th, 1908, with a view to her prospective confinement. She had had four previous pregnancies, the last three ending at term with rather large children ranging up to 9 lb. weight, and each requiring delivery by forceps. The last confinement was ten years ago. Her last period was in the end of March and she had quickened in mid-August. During this pregnancy she had felt unusual fatigue, and on examination she showed great abdominal distension. There was evident hydramnios and the uterus was almost as large as a uterus at term. The fetal length, however, corresponded to the assigned date of menstruation. Arrangements were therefore made for a confinement early in January. The patient's comfort was added to by a special bandage, but she had from this time mostly to keep her bed.

The nurse engaged for January got tired of waiting and took another case, and a second prepared for February had also to go, and it was not till I had decided on puncturing the membranes that the labour came on spontaneously. I had seen her frequently but never found any sign of engagement of the presenting head.

On February 19th, almost eleven months after the last menstruation, I was called at midday, and found that she had been in labour since the morning. The os was fully dilated, but the head not engaged. I ruptured the membranes to relieve the hydramnios, and then recognized that the fetus was an anencephal, and of large size. As this condition put delivery by forceps practically out of the question, I gave the patient chloroform and brought down the left foot, only to find that the breech would not enter the pelvis. I then brought down the other foot, and found that no amount of suprapubic pressure and traction on the legs which I could exert would bring the pelvis into the brim. At this deadlock, embryotomy was the next consideration, but it was evident that with legs corresponding to the size of the feet we saw protruding from the vulva it would be so difficult to reach the child's pelvis above the brim that with the subsequent necessary crushing of the shoulder girdle and skull base, embryotomy was to be a perilous process for the mother. I therefore asked and received the husband's consent for Caesarean section, and went to the telephone in search of an assistant and some catch forceps. I was fortunate in finding Mr. Price, who said he would bring both instruments and dressings. Pending his arrival at 5 p.m. I prepared the abdomen and kept the patient under light anaesthesia.

The operation, made with a vertical incision, presented no unusual feature except that the extraction of the child which I had so forcibly tried to bring through the pelvis was more than ordinarily difficult. After the child was extracted, the uterus was extruded, the placenta extracted, and the uterus sutured with catgut. The abdominal wound was sutured with silkworm gut, and dressed with sterile gauze.

Mr. Price and I were able to leave at 6 p.m., and the 60 c.cm. (2 oz.) of chloroform with which I started the afternoon were not exhausted. The puerperium was as smooth as after an ordinary confinement. There was no sickness. The temperature never rose over 99° F., and the wound healed normally. The patient was out of bed on the fourteenth day, and on the twenty-ninth day was able to go down town to see a play in which her children were engaged.

The child breathed for a few minutes. It measured 21½ in. to the skin border over the eyes, and 6 in. round the calf. It weighed 10 lb. The mother is a small woman but well developed, and has little if any pelvic contraction.

While I have no doubt as to the rightness of the management in this case, my expectation of performing Caesarean section in a practically normal pelvis is not high. The difficulties encountered seem to me such as are more likely to occur in general practice than in hospital.

TETANUS OCCURRING AFTER SURGICAL OPERATIONS:

IS THE INFECTION INTRODUCED BY CATGUT LIGATURES?

By W. G. RICHARDSON, M.B. DUNELM., F.R.C.S.,

SENIOR ASSISTANT SURGEON, ROYAL VICTORIA INFIRMARY, NEWCASTLE-ON-TYNE.

On September 30th, 1907, I operated upon an elderly lady, and removed a large number of gall stones from the gall bladder and cystic duct. After the operation the patient made most satisfactory progress in every way until October 6th, when some rigidity of the muscles of the neck appeared, followed rapidly by trismus and other well-marked symptoms of tetanus, from which disease the patient died within forty-eight hours of its onset.

I had heard of tetanus following upon surgical operations before this calamity overtook my patient, and I at once suspected that the bacilli of tetanus had been introduced in the catgut ligatures used at the operation, because in all the cases of which I had heard the same suspicion had been cast. Catgut was the material which I had used for ligatures and for deep sutures; the only other material which I had employed being silkworm gut for sewing up the wound in the skin. All the catgut in my possession was examined for me bacteriologically, and the report states that "the experiments made with this material to detect the presence of *Bacillus tetani* have proved absolutely negative. The catgut is absolutely sterile."

After receiving that report I was entirely baffled in the attempt to find a source from which the infection could have arisen, and I am still in the dark.

In January, 1909, I operated upon a middle-aged man for strangulation of the omentum in the sac of a right inguinal hernia. I used catgut for ligaturing the neck of the sac, for the blood vessels and for the deep sutures, and silkworm gut for suturing the skin. The patient did well and left the infirmary, with the wound healed, in fourteen days. A week later he was admitted with tetanus, from which he died two days later.

I have spoken to many surgeons upon the subject, and they all believe firmly that the infection is conveyed by catgut ligatures—not one of those with whom I have been in communication appears to have a doubt about it. One surgeon, who had two cases within eight weeks of each other, wrote as follows:

I had catgut and the pedicle from the fatal case examined both here and in London, with no particular result. No organisms were found in the catgut, and the cultures from the pedicle, though "resembling" tetanus bacilli, were negative in experiments upon animals. I am not sanguine of any more definite result being obtained, except in cases where tetanus bacilli are proved to exist in the catgut. I am morally certain that in my cases the catgut was responsible.

That accurately sums up the belief of those whose opinions I have obtained. It may be that such a belief is correct; indeed, in view of the fact that catgut was used in all the cases of which I have any knowledge, it would appear undeniable, and yet it must be confessed that no positive evidence has been adduced which entitles us to condemn catgut.