cleanliness have been the first measures adopted. Alkaline sitz-baths have been advised, to relieve the pain and remove the discharge.

In chronic bladder lesions, the local application of silver nitrate solution through a Kelly's speculum, followed by boracic lotion irrigation has given good results.

Caruncular excrescences of inflammatory origin have been snipped off and the bases cauterized, and similar treatment has been applied to acuminate condylomata.

Cases of acute salpingitis have been kept in bed until the temperature fell, on milk diet, saline aperients, having turpentine stupes applied for the severe abdominal pain. If pus was suspected, the abdomen was opened. In all but one case, at least one ovary has been left.

This patient, a young woman, came up a few months later looking very miserable. She said she had no pain, but felt wretched, was irritable, had pains in her head, and was getting thin. She improved on tonics to a certain extent. The operation had been for a pyosalpinx which had undergone torsion with resulting haematosalpinx. The other tube was diseased, and so intimately associated with the ovary that removal was necessary. The uterus was left.

It has been occasionally possible to excise the inflamed corpus luteum containing sero-purulent material by a wedge-shaped incision, leaving healthy ovarian tissue, and such cases have done well.

Expectant treatment has been adopted when the acute attack passed off rapidly, and the physical signs were slight. Unfortunately cases of complete recovery have been few, a relapse often driving the patient back into hospital. After a sharp attack, when the patient has to return to hard household labour, such as washing, it has proved more satisfactory to open the abdomen, and then to treat them as conservatively as possible.

In two of the 39 cases the uterus was removed with the tubes.

In one case an ovarian abscess communicated by a small fistulous opening with the rectum, and was secondarily affected by *B. coli communis*. All the pelvic organs were matted together by adhesions of some eighteen months' standing, and the uterus was removed for vaginal drainage. It was easier to remove than to leave it.

In a somewhat similar case of large ovarian abscess the wall had become adherent to the bladder, into which it was on the point of discharging. With some difficulty on account of the infiltration at the base of the bladder the uterus was removed with the tubes and right ovary, no rupture of the abscess taking place. As there was danger of leakage from the bladder, the pelvis was drained with iodoform gauze carried through into the vagina. The uterus was large, and its lining resembled the wall of an abscess cavity.

In both these cases the pouch of Douglas was opened up posteriorly to avoid leaving an undrained cul-de-sac. The after-result in these cases was better than in those in which the uterus was left, where leucorrhoea often persists.

Drainage has not been adopted in gonorrhoeal cases, unless there has been some complication, and only in one instance through the abdominal wall, where there was suspicion of injury to a ureter in a myxoedematous patient, whose condition did not warrant prolonging the operation. Drainage has proved to be entirely unnecessary, and, after mopping out the pelvis with warm saline solution on gauze sponges, the abdomen has been closed.

One case subsequently developed a small pelvic abscess, necessitating drainage, following the removal of a thickened tube and ovarian haematoma.

She was a very anaemic and debilitated woman. The abscess was so small that it could not be localized from below, and was reached through an incision above Poupart, through which adhesions were separated. Two fingers in the vagina were of assistance in locating the pus, the quantity of which did not exceed a teaspoonful.

In all cases the abdominal wall was sewn up in three layers, with fine catgut for the peritoneum, and buried continuous silkworm gut for the sheath of the rectus. No hernia has at present been reported, though belts were not advised, and the patients got up about the tenth day, leaving on the twelfth, unless there was some contra-indication. No suppuration in the abdominal wound occurred in any of these cases, except in that of the pelvic abscess, where the silkworm gut was removed at the second operation. It would appear that a high opsonic index has been reached, and that the tissues are highly resistant to microbial infection.

It is too soon to give complete after-histories. At present a considerable number have reported themselves as quite well. In three or four some chronic pain remains, and these are unfortunately those in whom adhesions were separated, leaving what were to all appearances healthy tubes. Leucorrhoea has persisted in some instances where the uterus was left.

Prophylaxis.

My object in bringing forward these facts is to renew interest in a disease extremely widespread, and the cause of endless suffering to many ignorant and innocent women, and in the hope that practical prophylactic measures will be suggested.

I would suggest that, with the co-operation of the medical profession as a whole, further investigations be undertaken to ascertain the extent of this disease, and some attempts made to lessen the incidence.

I do not venture to indicate how to deal with the sensitive social conscience of the present day, but it is obvious that ignorance constitutes a grave danger to the community.

Loyalty to the patient herself must be the first consideration, and the risks employers and others are running secondary. Apart from education, the only solution of the problem is notification, as has been suggested for ophthalmia neonatorum, so that early and complete treatment could be adopted and if necessary enforced. To this method, unfortunately, there are many grave objections.

REFERENCES.

- ¹ Allbutt and Playfair, ed. 1906, p. 555. ² Noeggerath, *Die latente Gonorrhoe im weiblichen Geschlecht*, Bonn, 1872. ³ Sanger, *Verhandlungen d. deutsch. Gessellschaft.*, 1886, i, p. 177. ⁴ Erb, *Munch. med. Woch.*, 1906, No. 27.

CAESAREAN HYSTERECTOMY IN PREGNANCY COMPLICATED BY MYOMA UTERI.

By JOHN BENJAMIN HELLIER, M.D.,

PROFESSOR OF OBSTETRICS IN THE UNIVERSITY OF LEEDS AND OBSTETRIC
PHYSICIAN TO THE LEEDS GENERAL INFIRMARY.

A GOOD deal has been written lately on the treatment of myomata in pregnancy. My experience in Leeds confirms the view that operative interference is very rarely called for to secure delivery. The myoma very rarely obstructs the birth. When, however, the parturient canal is seriously obstructed, operation is necessary to save the child and to obviate risks to the mother. When anatomical relations permit, myomectomy is the operation to be preferred, but in most cases that require operation hysterectomy is best.

CASE I.

Mrs. A. B., wife of a medical man, was brought to me by her husband in July, 1908, on account of myomatous growths in the pregnant uterus. She was 35, and had been married six years without becoming pregnant; she had enjoyed good health on the whole, and, though liable to dysmenorrhoea, had never suffered from menstrual excess. She had not suspected that anything was wrong with the uterus until a few weeks pregnant. Menstruation ceased in April, 1908, and labour was due about January 22nd, 1909. The usual symptoms of pregnancy were present when I saw her, but the uterus reached two-thirds the distance between pubes and navel in the third month, and there was a hard myoma on the right of the fundus. On vaginal examination, another could be palpated occupying the posterior and left wall of the cervix and projecting in the direction of the broad ligament. It was clearly recognized that this might prove an obstacle to normal delivery, but it was decided to let the case go to term if possible. The husband was very anxious that the child should be saved and that delivery should take place *per vias naturales* if possible, and that later the myoma should be operated upon, for he was contemplating removal to a foreign station, and very much dreaded the possible recurrence of the conditions now present at a time and place where skilled assistance might not be available. I willingly agreed to do my best to carry out his wishes, but stipulated that if at term the parturient canal were found to be seriously obstructed I should be at liberty to perform Caesarean section and deal with the myomata at the time as might seem best. What one would most anxiously avoid would be to allow labour to progress to the second stage and then to be compelled to destroy the child, or to risk damage to the myoma and uterus, or else to have to perform Caesarean section on a patient advanced in labour after fruitless efforts at vaginal delivery. This discretion was freely given by those concerned.

In the following month the uterus increased rather quickly in size, and there were at least two attacks of severe pain, with symptoms of obstruction of the bowels; fortunately these yielded to simple treatment. During the autumn there was a good deal of pain in the left leg, and vomiting was troublesome.

In spite of our fears to the contrary, she went to term, and when she came into a nursing home on January 20th I was delighted to find her in very fair condition and free from serious symptoms. There could, however, be no doubt as to treatment, for the head was mobile above the pelvis, and could not be made to enter it, while a large, solid tumour occupied the pelvis and could not be pushed up. The liquor amnii began to be discharged on January 21st.

Operation.

The operation was performed on January 22nd. Mr. Hann administered chloroform, and Mr. L. R. Braithwaite assisted me. Through a median abdominal incision I drew the uterus forwards and removed the child by an incision in the fundus. On drawing up the uterus I was glad to find that below the myoma in the cervix there was space for a satisfactory supra-vaginal amputation. The right ovary was not removed. I tied the vessels with catgut, drew the edges of the stump lightly together with a few catgut sutures, and sutured the peritoneum over it in the usual way. No drainage was necessary. The abdomen was then closed as usual.

This operation, which has superseded the old Porro, is to any one accustomed to hysterectomy a quick and easy one, for the size of the abdominal incision and the laxity of the tissues make it very easy to see and deal with all the parts concerned. The child was a very well developed male weighing 8 lb., and having a chest girth of 18 in. Except for a little temporary difficulty on the second day with intestinal distension, which yielded to treatment, the mother made an uncomplicated recovery. She had an abundant supply of milk, and suckled the child entirely from the fourth day onwards; the wound healed without suppuration, and the husband was able to take her home at the end of two weeks. She has progressed well since, and the child has gained on an average about $\frac{1}{2}$ lb. a week.

The specimen removed was shown at the Leeds and West Riding Medico-Chirurgical Society on May 7th; it measures after retraction and hardening $8\frac{1}{2}$ in. by 7 in. It shows three myomatous nodules in the corpus uteri, and one as large as a fetal head in the cervix. It does not project into the cervical canal, and could not have been removed by the vagina before delivery. A portion projected downwards towards the sciatic notch, and probably pressed on the nerves.

CASE II.

This bore a close resemblance to Case I. A woman, aged 31, married three years, primigravida, was brought to me, when three months pregnant, by Mr. H. J. Roper of Leeds, in July, 1908. She was a spare but not unhealthy woman, and had suffered from no serious degree of menstrual excess. The myomata had not been discovered before pregnancy. The uterus reached nearly to the navel, and at least three distinct and rather mobile myomata could be felt through the abdominal wall.

Per vaginam several nodules could be felt in the lower uterine segment, threatening obstruction in labour, although not so great as in the last case. The usual signs of pregnancy were present. Labour was due about January 18th, but she did not go quite to term, but came into the nursing home on January 6th with the liquor amnii discharging.

Operation.

The operation was performed on January 7th, its details being almost exactly the same as in the previous instance—supra-vaginal amputation, right ovary not removed, retro-peritoneal treatment of stump, no drainage, no difficulties. The child weighed $5\frac{1}{2}$ lb.; female. The mother was not able to suckle through failure of secretion. The wound healed without suppuration, and the recovery was uncomplicated.

The uterus removed shows an extraordinary number of interstitial, subserous, and submucous nodules; there must be about twenty in all, larger or smaller. One of the submucous nodules was almost detached in the uterine cavity. There was no appearance of degeneration in the myomata.

I may refer, in closing, to a case on which I operated several years ago, where a myoma complicated a four months' pregnancy and was causing pressure symptoms. It was felt in the pouch of Douglas, and was supposed to spring from the cervix and lower part of the uterus. It turned out to be a myoma springing from the fundus of a retroflexed pregnant uterus, and could be drawn out of the pelvis on abdominal section. The uterus is now in our museum, and the case illustrates a difficulty in diagnosis which is worth noting.

The safety of modern Caesarean section, whether conservative or mutilative, is so well established as to need little emphasizing, but I think that there are many women with a sufficient degree of pelvic contraction to lead to loss of child after child who might well be encouraged to undergo delivery by abdominal section for the sake of having a living child.

UNDER the will of the late Miss Ann Hill of Peterborough, who died on March 20th, the Hunstanton Convalescent Home and Peterborough Infirmary each receive a sum of £2,000. They are also entitled to share in the residuary estate, and from this source will probably each receive some £700 or £800 in addition.

A SUCCESSFUL CASE OF HYSTERECTOMY FOR PUERPERAL INFECTION.

By A. KNYVETT GORDON, M.B.CANTAB.,

MEDICAL SUPERINTENDENT OF MONSALL HOSPITAL, MANCHESTER.

In my own experience it is very rarely indeed that the question of performing hysterectomy for puerperal septic disease presents itself. In a series of 250 cases of the more severe type of puerperal fever, I have only attempted the operation once with a good prospect of success in the following case, though I have removed the uterus unsuccessfully in 5 other cases (twice by the vagina and three times abdominally) as a last resort and at the urgent solicitation of the relatives or of the medical attendant. As a rule, the patient is either in a condition of general septicaemia with streptococci in the circulating blood when she arrives at the isolation hospital, or if the lesion is well localized, reacts to vigorous disinfection of the uterus.

F. G., aged 23, a previously healthy primipara, was delivered at full term of a normal child on August 21st, 1908. A midwife only was in attendance, who is stated to have made vaginal examinations very frequently until the birth of the child, the labour lasting thirty hours. Half an hour after delivery, the placenta having partially come away, there was severe *post-partum* haemorrhage, and a medical man was summoned, who found it necessary to introduce his hand into the uterus in order to detach the remains of the placenta. He did not wear gloves, and was unable, owing to the absence of any facilities, to disinfect his hands, or even wash them satisfactorily. Half an hour later, as the bleeding recurred, he repeated the manoeuvre, and then gave an intrauterine douche.

Sixteen hours later the temperature rose and the patient had a rigor. She became rapidly worse, and ultimately—seventy-two hours after delivery—was notified as a case of puerperal sepsis and removed to Monsall Hospital.

Condition on Admission.

Her state was very grave. The pulse rate was 144 and the temperature 103° . The extremities were cold, and there was intense anaemia with much prostration. The abdomen was uniformly distended but there were no signs of general peritonitis; the fundus uteri could be felt externally 1 in. above the umbilicus. On further examination the vagina was found to be sloughing, with large necrotic masses on each labium and on the posterior wall. The cervix was split bilaterally, and the posterior lip was covered with greyish membranous exudate. The os was widely dilated, and fetid pus was flowing freely from the interior of the uterus, the cavity of which measured no less than 10 in. in length. The uterine wall was everywhere softened, and it would have been possible to push the finger through its substance without difficulty. At the fundus were several partially loose masses of placental tissue.

The advisability of removing the uterus forthwith was considered, but as the patient was worn out from want of sleep and in a very dirty condition from the absence of proper attention, and as it also appeared desirable to investigate the bacteriology of the blood before operating, I decided to temporize. Accordingly, under the analgesia afforded by a dose of alcohol followed by morphine subcutaneously, I scraped the interior of the uterus thoroughly with a large sharp curette, and swabbed the resulting raw surface with pure iodo solution, packing the cavity subsequently with gauze soaked in a 1 in 100 solution of the same preparation. Three pints of saline solution were then given subcutaneously.

Operation.

On the morning of the next day the patient had rallied somewhat, but the pulse-rate had not diminished, and the temperature remained at 103° . Two rigors had occurred. The cultures taken from the blood showed no growth (and remained sterile subsequently), while those from the interior of the uterus showed *B. coli* and *B. proteus* in large numbers. I came to the conclusion that there was no general bacillary infection, and that it would probably not be possible adequately to disinfect the uterus by further local palliative treatment, so I opened the abdomen and amputated the uterus at the level of the internal os, leaving both ovaries, and covering the stump with peritoneum in the usual manner. A rubber tube was placed in the remains of the cervix, and the peritoneal cavity closed without drainage. After the effects of the ether had passed off the patient was propped up in the sitting position, and three pints of saline solution given subcutaneously.

After-History.

For the next ten days the temperature remained at about 101° until the discharge of pus from the cervix and sloughing vagina had ceased, but her progress after the operation was otherwise very favourable. She left the hospital sixty days after the operation with a firmly healed abdominal wound, and free from vaginal discharge. A month later I saw her again, and found the vaginal vault firmly healed. She had resumed her work as a tailoress, and had menstruated since her discharge.