A CLINICAL LECTURE

ON

PUERPERAL INGUINAL PARAMETRITIS;

OR THE COMMON KIND OF PELVIC CELLULITIS.

*Delivered at the London Hospital.*By G. E. HERMAN, M.B., F.R.C.P., F.R.C.S.,
Senior Obstetric Physician to the Hospital.

GENTLEMEN,—My subject to-day is the common kind of pelvic cellulitis, or puerperal inguinal parametritis.

WHY PUERPERAL CELLULITIS IS OFTEN INGUINAL.

Cellulitis after delivery is usually inguinal, because during pregnancy the cellular tissue at the side of the uterus becomes looser, and the peritoneum is raised above the brim of the pelvis, so that at the end of pregnancy there is loose cellular tissue extending from the side of the uterus to the groin. Hence inflammation of pelvic cellular tissue after delivery tends to spread up to the groin. Apart from pregnancy the cellular tissue is not so loose, the peritoneum is not raised up towards the groin, and so cellulitis is seldom inguinal. Puerperal inguinal cellulitis is commoner than any other kind.

HISTORICAL.

It was first described by Mauriceau in 1740. Before him these cases were either called abscess of the womb, or the nature of the disease was not recognised. Mauriceau was the first to describe the abscess as not situated in the womb, but at the side of the womb. For a long time the pathology of the disease was not understood. These swellings were supposed to be due to reabsorption of the lochia or to reabsorption of the milk, and were called "milky deposits." You will find little that is clear about this condition in the books written before the second half of this century, because the older authors classed together every kind of pelvic abscess whether in the ovary, or the tube, or in the peritoneum; whether arising from disease of the bowel, or of other parts of the pelvis; the situation of the disease was not defined. For that reason there is difficulty in getting a clear idea of pelvic cellulitis from any book written before the middle of this century. About that time attention was drawn to the frequency with which inflammation and suppuration in the pelvis was not in the cellular tissue but in the peritoneum, and depended upon disease of the tubes or ovaries. This led to such an over-estimate of the frequency of peritoneal inflammation that even during the last ten years operators have opened the abdomen and been surprised to find that the disease was not in the peritoneum but in the cellular tissue outside the peritoneum. There was a good excuse for the older authors failing to distinguish between cellulitis and peritonitis, because in severe cases the two are combined. In the most acute cases of cellulitis after delivery the inflammation rapidly spreads to the peritoneum. In cases of tubal inflammation and pelvic peritonitis which has existed long, there is generally thickening of the cellular tissue. Even in cellulitis not of the most severe type the peritoneum is often affected. But in the slighter forms the peritoneum is not affected. In the cases I shall describe there is no affection of the peritoneum unless from some exceptional complication. Even after pelvic cellulitis was known, and its symptoms and signs understood, the student found considerable difficulty in getting a grasp of its common symptoms, because in most of the books the common and rare forms of cellulitis are described together.

THE COMMON FORM OF PUERPERAL CELLULITIS.

There is one form of cellulitis commoner than all the rest put together, and I shall describe to-day this form and no other; it is that in which the inflammation spreads into the inguinal region. It forms a swelling in the groin. Sometimes it ends in absorption, sometimes in suppuration. When it suppurates it commonly points above the middle of Poupart's ligament. I refer not now to cases which burst in unusual places, are complicated by unusual features, or run an exceptional course. All the cases may be alike etiologically, but if they run an exceptional course and are complicated by exceptional features they are clinically different.

ETIOLOGY.

There are two main causes of cellulitis—namely, (1) childbirth, and (2), apart from pregnancy, injuries to the cervix. The majority of cases are puerperal. Most of the patients are young, simply because most puerperal women are young. I have gone through my hospital records during the last seven years, and I find that during that time 63 cases of this common kind of cellulitis were admitted; of this 63:

23	were aged between	20 and 24
15	"	" 25 " 29
15	"	" 30 " 34
9	"	" 35 " 39
1	was aged over	40

63

This shows you that while puerperal cellulitis may occur at any age, it is more common in the younger child-bearing women. With regard to the labours it was

the 1st in	19 of them	the 7th in	5 of them
" 2nd in	10 "	" 8th in	2 "
" 3rd in	7 "	" 9th in	3 "
" 4th in	4 "	" 11th in	1 "
" 5th in	5 "	" 13th in	2 "
" 6th in	3 "		

These figures show an undue proportion of women having their first children.

It is believed that puerperal cellulitis, like most inflammations, is produced by micro-organisms, but we know little as to how those organisms act. The streptococcus, the staphylococcus, and the bacterium coli have often been found in the pus of pelvic cellulitis. The streptococcus produces widely different effects—sometimes a slight local inflammation, sometimes the one-hundred-millionth of a cubic centimetre is enough to produce death. When the effects of different specimens of apparently the same organism differ so much as this, we cannot say that we know much about it. We know not in what circumstances the streptococcus, when introduced into the female genital canal, produces inguinal cellulitis. Attempts have been made to produce this disease in animals by injecting staphylococci and streptococci into their cellular tissue, but these attempts have failed to produce a disease running anything like the course of pelvic cellulitis. An inflammation has been produced resembling that caused by injecting these organisms into other parts of the body, not one taking the course of pelvic cellulitis. The bacterium coli, in its native haunts, seems to be innocuous. After operations about the rectum, or after colotomy, where the wounded surfaces must be soiled by the bacterium coli, which abounds in these neighbourhoods, no harm appears to result from its presence. We know not the circumstances under which inflammation of the cellular tissue is produced by micro-organisms. From the fact that it follows childbirth, it is believed that the action of the organisms must be favoured by damage to the tissues produced by childbirth, but at the present time we have no knowledge of what the special injuries are which render the pelvic cellular tissue liable to become a nidus for these organisms. Whether cellular tissue which is compressed, displaced, and stretched during parturition is thus made a suitable food for micro-organisms we know not. I think the disease is caused in that way rather than by direct inoculation, because if it were by the latter the symptoms would immediately follow inoculation; they do in the most severe cases, but in the majority the inflammation does not begin until some days or weeks after delivery. That leads me to think that the part is first damaged, and that then the damaged tissues form a nidus in which the organisms multiply and so change their characters as to become capable of producing this pelvic inflammation.

It has been stated that laceration of the cervix is a cause of pelvic cellulitis. But deep laceration of the cervix is often found in a patient who has no sign of past or present cellulitis, and in many cases of pelvic cellulitis the injury to the cervix is slight, so that laceration of the cervix uteri is not necessary for the production of the disease. It is believed that cellulitis may be due to a wound of the vagina or to effusion of blood into the cellular tissue, but these injuries have not been identified with the frequency necessary to establish that view. It is difficult to get information as to the antecedent conditions of cellulitis, because it is not usual to examine puerperal women during the first few days of their lying-in, and unless this is done no

one can say what injuries may or may not have been present. And then, again, the symptoms at the beginning are usually slight; often the patients get up at the usual time. The result is that we have little information as to the local conditions antecedent to pelvic cellulitis.

Some think that gonorrhoea may cause puerperal cellulitis. This is supported by the fact that experiments have shown that gonorrhoea is capable of producing inflammation of cellular tissue, as is clinically seen in gonorrhoeal stricture of the urethra. But although inflammation of the cellular tissue may be produced by the gonococcus, in the common cases of pelvic cellulitis there is no evidence of gonorrhoea. When gonorrhoea in women spreads, it extends up into the uterus and along the tubes; it is exceptional for the cellular tissue to be affected. If the cellular tissue is inflamed by the presence of the gonococcus, that inflammation does not run the clinical course of ordinary puerperal parametritis. Chill is invoked as a cause of pelvic cellulitis, as it is for a great many other inflammations. It may be that chill so lowers the vitality of the tissues as to render them more prone to suffer from the invasion by micro-organisms. But the number of cases of inflammation of all sorts that are attributed to chill is decreasing. Many effects were formerly attributed to chill, as to which we are now sceptical. I think chill has little to do with pelvic cellulitis.

In many cases there seems to have been nothing abnormal with the labour. Of my 63 cases, I have information as to the labour in 23 which ended in suppuration and 25 in which there was no suppuration. Of the 23 cases which suppured, in 16 there was no difficulty with the labour; it was said to have been "easy" in 9, "normal" in 2, "good" in 2, and "premature" in 3. On the other hand, the labour was said to have been "difficult" in 1, "lingering" in 2, forceps were used in 2, 2 were "instrumental"—not stated what instruments were used—in 1 there were twins born dead; that makes 7 abnormal cases. You will observe that in two-thirds there was no difficulty with the labour.

Of the cases which did not suppurate, in 11 there was no difficulty; in 7 it was "easy," in 3 "natural," in 1 "premature." In 14 there was some difficulty in the labour. It was "slow" in 1, "not so easy as former labours" in 1, "long" in 1, "bad" in 1, child born dead in 1, labour was finished by version in 2, was "instrumental" in 3, ended by forceps in 3, adherent placenta had been present in 1. Thus, taking both sets together, there are 27 in which there was no difficulty with the labour against 21 in whom there was a difficulty of some kind.

There is a fact about which it is easy to invent explanations. The disease occurs more frequently on the left side than on the right. I shall not quote figures published in textbooks, but they all show this fact. In the cases—both suppurating and non-suppurating—I have investigated, 35 were on the left and 21 on the right side.

ONSET.

The illness does not, as a rule, immediately follow delivery; generally there is an interval. I find that 29 of my cases were taken ill within a week of delivery, namely:

Dating from delivery	Cases.
Second day from delivery	12
Third "	3
Fourth "	7
Fifth "	2
Sixth "	1
Seventh "	2

Seventeen were not taken ill until after the first week, namely:

day from delivery	Cases.
Eighth "	1
Tenth "	2
Twelfth "	3
Fourteenth "	5
Sixteenth "	1
Eighteenth "	1
Twentieth "	1
Three weeks "	1
Four "	1
Five "	1
Seven "	1

The figure shown at the fourteenth day, I think, simply means the end of the second week, not a special liability on that day.

Here is an important fact about the disease. Of the cases

which were taken ill within a week, 21 ended in resolution and only 8 went on to suppuration. Of those in the second week, 7 ended in resolution and 6 in suppuration. All but 1 taken ill after the fourteenth day suppured. Four of them were taken ill after the twentieth day; all these suppured. These figures show that the later the illness comes on the greater is the liability to suppuration.

SYMPTOMS: PAIN.

The prominent symptom is pain, referred to the affected side, which often, but not always, is so severe as to keep the patient awake at night. The pain is commonly described as a burning or shooting pain. In 58 cases pain was present in all but 1. In 1 it did not come on till the thirty-third day; this patient had kept her bed since delivery. One, who had a rigor on the fifth day, said she had no pain till six weeks after delivery. In another, who dated her illness from the day she got up, twelve days after delivery, pain was not felt till three weeks after. One patient had pain on the second day, got up on the thirteenth day, and dated her illness from the fourteenth. In all the rest pain was present from the beginning of the illness.

SHIVERING.

Rigors occurred in about one-fourth—in 15 out of 58 cases. In 5, or one-twelfth of the cases, it is expressly stated in the notes that the patient had not shivered. In the others it was not mentioned whether the patient had shivered or not. In 2 the rigor occurred on the second day, in 2 on the third day, in 1 (several rigors) on the fourth day, in 2 on the fifth day. In the others the date of the rigor is not given. One, who shivered on the fifth day, dated her illness from the third day on which the pain began. In the others with dated rigors it was the beginning of the illness. Seven of the 15 suppured, 8 not. Rigors seem more frequent in the cases which come on early, and they modify not the prognosis. The average illness in the non-suppurated cases was sixty-six days; in those of them that had rigors, sixty-one days. The average illness in the suppured cases was ninety-three days; in those that had rigors, eighty-five days. It seems from that as if the persons who had rigors had a shorter illness; but I think the explanation of it is that the rigor enabled the date of the illness to be fixed.

WEAKNESS.

I mentioned that in many cases the patients get up at the usual time and have to go to bed again afterwards. "Weakness" is the reason commonly given why they have to go to bed again. I have information on this point in 20 of those which did not suppurate.

7	had not left their beds
1	got up on the seventh day
1	" " eighth day
1	" " ninth day
5	" " tenth day
1	" " twelfth day
1	" " fourteenth day
1	" " eighteenth day
1	at the end of three weeks
1	" " six weeks.

Of 19 that suppured

2	had not left their beds
1	got up on the fourth day
1	" " seventh day
1	" " ninth day
4	" " tenth day
1	" " eleventh day
"	" " thirteenth day
4	" " fourteenth day
2	got up in the third week
1	got up after four weeks
1	" " five weeks.

FEVER.

Besides pain, weakness, and sometimes shivering, there is fever. The maximum temperature while in hospital in the non-suppurating cases was from 99° to 105°. This latter temperature, which occurred in one case, was only an isolated rise, and was probably due to some temporary cause other than cellulitis. The highest temperature due to cellulitis was 105°, and the average maximum temperature while in hospital 101.9°. The highest temperatures in most cases were near the average. I think the temperature may have been higher in the beginning of the disease, before admission; but as to the initial temperature I have no record, nor do I

know of any that have been published. The maximum temperature while in hospital was :

Under 100° F. in 4.
From 100° to 101° in 8.
From 101° to 102° in 11.
From 102° to 103° in 8.
Over 103° in 7.

In the suppurated cases the fever ran a little higher. The maximum temperature while in hospital was from 98.5° to 104°.

The average maximum temperature while in hospital was 102.1°.
In 3 it was under 101°.
In 9 from 101° to 102°.
In 14 from 102° to 103°.
In 2 over 103°.

PHYSICAL SIGNS.

Before there has been time for coagulable lymph to be thrown out, there are no physical signs, but, as the disease advances, the cellular tissue becomes swollen and infiltrated with lymph, and the swelling makes its way by the side of the round ligament to the front, and spreads up between the transversalis fascia and the peritoneum. It spreads up as high as the loose cellular tissue between the transversalis fascia and the peritoneum extends. At a certain point in the abdominal wall the peritoneum becomes firmly adherent to the sheath of the rectus muscle, so there is no loose cellular tissue between them, and when that point is reached the swelling goes no higher. Therefore in inguinal cellulitis you find a swelling which almost always has the same characters. The swelling, starting from the anterior superior iliac spine, rises to within one or two fingers' breadths below the level of the umbilicus; then runs horizontally inwards to within about 2 inches from the middle line; then slopes downwards, reaching the level of the symphysis about half an inch beyond the middle line. When you examine bimanually you find that the inner part of the swelling is the uterus. You may get a case when the swelling is in the process of absorption, and then it will not be so large. By the vagina a firm swelling is usually felt on the same side as the inguinal swelling. Early in the case this feels as if it were continuous with the uterus at the level of the vaginal insertion; but later on it may be so high up as only to be reached with difficulty.

When these cases are kept at absolute rest in bed, if the inflammation is not going to suppurate, the fever subsides and the swelling disappears. The average duration of fever after admission to hospital in the non-suppurating cases was sixteen days.

EFFECT OF EARLY TREATMENT.

Early treatment is one of the most important influences which modify the course of the disease. The essential treatment consists in absolute rest. The patients we get here, who are poor, cannot get that rest at their own homes. That is clearly shown in this way. The period after delivery at which each patient was admitted varied from two days to four months. Of those admitted within a fortnight after delivery, none suppurated. Of those who were admitted less than a month after delivery, only 3 suppurated, 18 did not. Of those that were admitted more than a month after delivery, 24 suppurated, and 17 did not. This might be accounted for by the fact that the cases coming on late seem more prone to suppurate. But I shall give you other figures, not to be so explained, which show the effect of treatment.

LENGTH OF ILLNESS.

The following table shows the average length of time in hospital and length of illness in the cases which did not suppurate. The shortest illness was 23 days in the case of a patient admitted on the second day of the illness. The longest illness 149 days; this patient had been ill 112 days before admission. The shortest times spent in hospital were 5, 8, and 13 days: these patients had been ill 77, 28, and 12 days respectively before admission.

The average length of the illness from the beginning till they left the hospital well, in cases which did not suppurate, was 67 days.

The following table shows the number above and below the average :

Under 30 days	...	...	...	2
30 to 50 "	...	...	...	5
50 to 80 "	...	...	...	18
80 to 100 "	...	...	...	6
Over 100 "	...	...	...	2
Shortest 23 days				
Longest 149 "				

If the case suppurates, the swelling, instead of getting smaller, bulges, becomes softer, and at length fluctuation is felt above the middle of the level of Poupart's ligament. While this is going on, fever keeps up, and the patient gets thinner and weaker. Then, if properly treated, the abscess is opened. In the cases on which I found these statements the average day after admission on which the abscess was opened was the twelfth. Among those which suppurated the average length of the illness was 93 days. The earlier the patients were admitted the longer was the time after admission before the opening was made; obviously because in those who were admitted late the abscesses were riper for opening than in the others. But the difference in this respect is not so great as to be due entirely to that cause.

Cases which Suppurated.

Date of Opening.	Opened.	In Hospital.	Total Illness.
1 case ill a week only before admission (symptoms either exceptionally slight or error in report)	2nd day Average Date of Opening.	20 days Average.	27 days Average.
8 cases ill under one month (average 22.3 days)	15th day	44	67
9 cases ill from one to two months (average 47 days)	12th day	43	90
6 cases ill over two months (average 95.8 days)	9th day	39	135

Average date of opening 12 days.
Average length of illness 93 days.

Cases which did not Suppurate.

Ill Before Admission.	Days in Hospital.	Length of Illness.
Under 10 days (2 cases)	27.5	34
10 to 30 days (13 cases)	32	52
30 to 50 days (10 cases)	25	63
Over 50 days (8 cases)	30	104

The figures above given, showing the length of illness before admission and the length of stay in hospital go to show that, so long as the patients are not being treated, and are getting about, trying imperfectly to do their household work, so long the disease does not tend to get well. When the patients are in the hospital there is little difference in the length of illness between those who have been ill a long time and those who have been ill a short time.

The following figures briefly summarise the length of the illness :

Non-suppurated cases :			
Stay in bed	...	...	5 to 47 days.
Average	...	...	23 "
Stay in hospital	...	...	5 to 56 "
Average	...	...	29 "
Suppurated cases :			
Stay in bed	...	...	14 to 67 "
Average	...	...	32 "
Stay in hospital	...	...	18 to 88 "
Average	...	...	43 "

I gave you the average duration of the fever (16 days) in the non-suppurating cases, but I did not mention that of the suppurating cases, because the effect of opening the abscess is on the next day or in two or three days to bring down the temperature. When the pus has escaped, the swelling rapidly diminishes and the patient improves.

FLEXION OF THE THIGH.

Sometimes the inflammation invades the psoas muscle, either by invading the substance of the muscle or by suppurating spreading between the psoas muscle and the os innominatum. When this happens the tension of the psoas muscle, when the thigh is extended, becomes intolerable to the patient, and she keeps her thigh bent at nearly a right angle, and held there fixed.

In the 63 cases which I have investigated, flexion of the thigh existed in 6. The cases with flexion of the thigh are generally those which suppurate, but sometimes it occurs without suppuration. The duration of illness before admission in these cases was 83 days, their average stay in hospital 57 days, and their total illness 140 days. Five of them suppurated. The length of time in hospital before the abscess was opened was from 15 to 47 days. Their maximum temperature was from 100.5° to 104.5°, the average being 102.8°. From these figures you will see that flexion of the thigh implies that the illness is severe.

ALBUMINURIA.

The late Dr. Matthews Duncan reported some cases in which, with pelvic cellulitis, there was albuminuria, but nothing to account for it—no casts and no pus. This existed during the cellulitis, and ceased when the cellulitis got better. In 58 cases in this hospital the urine was examined, and out of the suppurating cases in 5 there was albumen, but it was a trace only. Out of 30 non-suppurating cases, there was a trace of albumen in 9. In 1 the urine was not drawn off with a catheter, and the albuminuria may have been due to admixture of menstrual blood.

TREATMENT.

In the treatment of these cases the essential thing is to keep the patient at rest, and to maintain her strength by suitable food, while relieving her pain by narcotics if necessary. This is all that is essential. There is no drug that has been proved to have any influence on the absorption of pelvic cellulitis. You can please the patient, perhaps relieve her pain, and certainly do no harm, by applying fomentations made with sedative drugs to the part. It is possible that the fomentation may hasten the absorption, but we have no evidence of it. When suppuration has taken place, the important thing is to let out the pus as soon as you can. In some cases relief can be given by making an incision, and so relieving the tension even before pus is discovered. But in the inguinal region it is not prudent to do so on account of the nearness of the peritoneum; because if you have to search for pus, you may open the peritoneum, and then, if there is only a small quantity of infective pus, that may find its way into the peritoneum, and set up peritonitis. In other parts than the inguinal region that practice can be carried out more safely, but I speak not in this lecture of such cases. The important thing in the case of suppurating cellulitis is to open the abscess, and let out the pus as soon as possible, and then keep the patient quiet while the abscess is healing. Few effects of surgical treatment are more striking than the rapid improvement in cases of parametritis when the pus has been let out.

Let me repeat that in this lecture it has not been my purpose to describe all the clinical features that parametritis may present, but only those of the common cases, which far outnumber the rare exceptional forms.

TWO CASES OF EXTIRPATION OF THE UTERUS FOR EXCESSIVE HYPERTROPHY AND PROLAPSE.

By T. ARTHUR HELME, M.D., M.R.C.P. LOND., F.R.S.E.,
Honorary Senior Assistant Surgeon to the Clinical Hospital for Women and Children, Manchester.

The terms "hypertrophy" and "prolapse" are not a complete pathological description of the condition present in the two cases which are here reported, but represent the two most prominent clinical features, for in both there were excessive growth of the uterus and extrusion of the cervix with the anterior vaginal wall, part of the bladder, and the urethra through the vulvar cleft; the posterior vaginal wall was not extruded, the posterior fornix remaining apparently about its normal level. The term "prolapse" should, strictly speaking, be limited to cases of herniation of the entire pelvic floor, where there is unfolding and protrusion of both anterior and posterior vaginal walls, between which the uterus hangs, as it were, in a sac. In these cases the operation of hysterectomy has been tried

and by many found wanting, for the removal of the displaced uterus does not of itself cure the hernia of the remaining portion of the pelvic diaphragm; it has therefore, it seems, been almost abandoned by some operators, at least, in favour of other operations, for example, plastic operations on perineum and vagina, coupled with suspension of the uterus to the anterior abdominal wall or vaginal fixation; on the other hand, some operators have gone so far as to excise not only the uterus, but also the whole or part of the vagina, so as to produce obliteration of the genital canal; such a radical measure, however, can only be suited to a small number of cases. In such a condition, namely, simple prolapsus, I have obtained very satisfactory results by repairing the perineum and stitching the fundus of the uterus to the anterior abdominal wall, one patient so treated having gone through a subsequent pregnancy and normal labour (at full term) without prolapse recurring. On the other hand, one very occasionally meets with a condition of extreme hypertrophy of the uterus without any herniation of the pelvic floor, as in the case of a virgin, aged 20, upon whom I operated about three years ago, and in whom the cervix protruded through the vulvar orifice, whilst the fundus remained at its normal level, and the vaginal fornices and perineum were practically intact. In this case, after ligation of the uterine arteries, the cervix was excised above the level of the vagina, with good result.

The two cases which I now report belong to a class which stands midway between the two classes to which I have just alluded; in both there was great hypertrophy of the uterus itself, especially of the cervical portion; with protrusion of the lower part of the cervix through the vulvar opening, together with the anterior vaginal wall and portion of the bladder and the urethra, the latter apparently having been dragged downwards by the advancing cervix. In both cases the fundus uteri was to be felt behind the symphysis pubis, and in both the posterior vaginal fornix existed, and apparently stood about its normal level. In the one case the sound passed 6½ inches, and the lower part of the cervix was hugely hypertrophied, so much so that when I saw it the cervix could not, on account of its bulk, be replaced within the vulvar aperture, and was much congested and ulcerated. The patient, a multipara, aged 47, said she had herself been unable to "get it back" for about a year. She had had six children, the youngest having been born ten years ago; there was some "prolapse" (probably of the anterior vaginal wall) after the first confinement 29 years ago. Menstruation had been regular every four weeks, but excessive, and for some months there had been urinary trouble.

In the second case the sound passed 5½ inches; the lower portion of the cervix was not so greatly hypertrophied, but a large part of the bladder was outside the vulva. In this case, also, as in the other, the fundus was to be felt behind the symphysis, and the posterior vaginal fornix seemed to be about its normal level. This patient was 52 years of age, and complained of "the womb coming down" since the birth of her last child six years before. The perineum had been repaired four or five years before, and I had myself done a colporrhaphy and perineorrhaphy about three years before, with only slight and temporary benefit.

It was a question in both cases as to whether amputation of the cervix above the vagina would be sufficient, or if hysterectomy would give a better result. The question of whether to open the peritoneal cavity was not practically a matter of choice, for in both cases it would have been impossible to remove even the cervix without so doing, as the posterior peritoneum reached an unusually low level (reaching outside the vulva), so low, indeed, in the first case that the circular vaginal incision around the cervix at once brought peritoneum into view. It was therefore decided to remove the uterus, afterwards carefully closing the peritoneal cavity in the usual way, broad surfaces of peritoneum being brought together by a fine continuous silk suture; at the same time the cut ends of the various uterine ligaments were bunched together by ligatures and fixed in one central knot. By means of buried sutures the large raw area of connective tissue covering the bladder was diminished, and the bladder wall folded upon itself. The cut edge of the anterior vaginal wall was then brought up to the level of the posterior vaginal incision, and a broad raw area on both flaps brought together, the effect of