INTERMENSTRUAL PAIN (MITTELSCHMERZ).

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(*Abstract.*)

The author draws attention to a condition of recurring intermenstrual pain which he believes to be more frequent than is generally supposed.

He describes the clinical history of four cases which have occurred in his own practice, and discusses cases quoted by previous authors.

He points out that a marked feature in the great majority of cases is the presence of a clear watery discharge.

He shows that in nearly all the recorded cases a tubal lesion is present, which he believes to be salpingitis proceeding to hydrosalpinx.

He draws attention to the pathological analogy between this condition of tubal colic and appendicular colic of the vermiform appendix.

He endeavours to explain the periodicity of the phenomena by suggesting the existence of a secondary intermediate discharge of nerve energy operating upon diseased tubes in certain individuals.

A table is drawn up of all the hitherto recorded cases.

In the 'British Medical Journal,' Oct. 19th, 1872, there is an account by Sir William Priestley of a paper read before the Royal Medical and Chirurgical Society, entitled "Intermenstrual Dysmenorrhœa," wherein he described a series of cases in which the prominent symptom was pain

occurring at regular intervals between the monthly flow. But although the cases I am about to describe are similar in character, I prefer the title given by the Germans to this disorder, as the term dysmenorrhœa is misleading, in so far as it is generally associated with a flow of blood accompanied by pain. My object to-night is to invite the attention of the Society to a condition which I believe to be not infrequent, but which, as far as I can gather, has received somewhat limited attention, the chief characteristic of which is pain, varying in intensity, referred to the ovarian regions, recurring with marked regularity fourteen days after the normal menstrual period.

The first case is that of Miss G—, aged 29, unmarried. I first saw her in December, 1895. She was a delicate, anæmic-looking woman. She complained of great pain in the hypogastric region, extending over the whole of the lower part of the abdomen. This pain lasted for two or three days. It recurred with perfect regularity on the twelfth to fourteenth day after her normal period, and had increased in intensity for the last four or five years. At the end of the first day it would markedly diminish, and on the second or third day the pain was gone, but she was left with a feeling of weakness and exhaustion. The menstrual period was regular, the amount was profuse, accompanied by clots and shreds, and she suffered from dysmenorrhœa and leucorrhœa. She herself attributed this middle pain to indigestion, and had been treated for that complaint by several physicians. On vaginal examination I found erosions of the os uteri, the uterus anteflexed, and a distinct elongated swelling in the left broad ligament. The left ovary was large and tender; the right was normal. On inquiry I learned that she had been in good health up to five years previously, when she suffered from a severe attack of influenza whilst she was menstruating, which confined her to bed for a fortnight, with sudden arrest of the period, and what she described as "internal inflammation." Since then the periods had

been profuse and painful, and this intermenstrual pain had gradually increased. After consultation with Dr. W. Playfair I decided to dilate and curette her, and did so five days after her period had ceased. The curette removed a considerable quantity of adenomatous growth. A week after the curetting, while still in bed, I was sent for. I found her in great pain, which she described as her usual attack. The next morning the nurse in charge of the case informed me that the patient had passed a considerable quantity of thin watery discharge, after which the pain gradually ceased. On examination I found the swelling in the left broad ligament had disappeared to such an extent that, had I not known of its previous existence, I should have detected nothing abnormal. The next period was much less profuse, and the dysmenorrhœa was improved by the curetting, but the mittelschmerz returned in due course. In May, 1896, I examined her, and found the swelling had again increased in the left broad ligament. She went for six weeks to Schwalbach, where she derived considerable benefit. She went for another course this year, and is now much improved, the pain being less, and some months entirely absent.

The second case is that of a lady aged 31, unmarried, whom I first saw in January, 1896. She was a sister in a religious order, and complained of complete inability to perform her duties in consequence of increasing ill-health, which had been getting steadily worse for the last nine years.

Her period was profuse, lasting eight days, the first two days being accompanied by pain. She passed shreds and clots, constipation was so marked that she was never able to have an evacuation of the bowels without mechanical assistance; but what she complained of most was the fact that no sooner had she got over the effects of her period than she was subject to a severe pain far exceeding that of her period, which recurred always about the fourteenth day, lasting for two or three days, during

which she was completely incapacitated, and had to lie in bed with hot fomentations applied. The constant pain and severe loss was quickly reducing her to a condition of chronic invalidism. She was unable to stand for any length of time, walking was out of the question, and her life, instead of being devoted to usefulness, was spent upon the sofa. On examination I found the uterus acutely retroflexed with several prominent fibroid nodules; the sound passed four and a half inches; the left ovary was prolapsed and enlarged and matted to the side of the uterus; the right ovary was enlarged and tender. She was curetted without any real benefit. Being very anxious to resume her work, I, after consultation with Mr. Bland Sutton, in September, 1896, removed both ovaries and appendages, and performed hysteropexy. Both ovaries had numerous cysts; the right was nearly twice its normal size, the uterus was studded with fibroid nodules, and the left Fallopian tube was much thickened. The patient is now perfectly well, she has had no pain or period since the operation, and she has resumed her life of activity.

The third case is that of Miss D—, aged 28. First seen in December, 1894, she consulted me for recurring attacks of pain in the left ovarian region, which came on twelve or thirteen days after her period, and gradually spread over the lower part of the abdomen, but always started at a point midway between the symphysis pubis and the anterior superior iliac spine. The menstrual flow was normal as to regularity and quantity, and was quite painless. There was a slight leucorrhœa, but she informed me that on several occasions she had passed during these attacks of pain a considerable quantity of clear watery fluid. She had never passed blood on these occasions.

On examination I found the uterus markedly retroflexed and bulky; a sound was not passed; there were two fibroid nodules about the size of a large walnut; the left ovary was tender, and there was a soft elastic swelling

in the left broad ligament; nothing abnormal was detected on the right side. Hot douches were advised, but made very little difference. This patient is the subject of advanced cardiac disease, and is now dying of ulcerative endocarditis. In May, 1895, and in December of the same year, and again in July, 1896, she passed considerable quantities of clear watery fluid during her attacks of middle pain. I saw her quite recently. She has not menstruated for six months, neither has she had an attack of pain.*

The fourth case is that of Miss S—, aged 33. She first consulted me in October, 1897, for recurring pain, so severe as to necessitate her remaining in bed. This pain is always confined to the right side. She was examined three years ago by a gynæcologist for dysmenorrhœa. This she continues to suffer from.

The uterus is anteflexed; there is an increased fulness in the region of the right broad ligament; both ovaries appear normal. For the last nine months this middle pain has increased. It is sometimes accompanied by discharge of clear fluid, never by any coloured discharge. Sometimes it is sharp and acute, and her own words are "it is deep-seated, and goes right through to the back, and is always most severe when I have a watery discharge with it, and then it gets much better." She accounts for what she terms this "new development" by catching cold and getting her feet wet at the time of her period, which suddenly became arrested, and then she was ill for some weeks. This occurred five years ago, and since that time she has been in increasing ill-health. The only treatment suggested so far has been hot douches between the periods, increased in frequency at the time of the middle pain.

In vol. xxi of the 'Transactions of the Edinburgh Obstetrical Society' there is a paper, with notes of a dis-

* Since this paper was written the patient has died. Unfortunately a post-mortem examination was refused.

cussion following, by Dr. Halliday Croom, under the title "Mittelschmerz."

In two out of three of Dr. Croom's cases, in the majority of the cases quoted by subsequent speakers, in all of the four cases quoted by Sir W. Priestley, and certainly in all of my four cases, there has been observed a fulness, if not a distinct swelling, in the broad ligament on the side which has been the seat of pain. In a certain number there has been noted the discharge of clear fluid, sufficiently copious to be remarked by the patient, and to be distinguished from a severe leucorrhœa. This was the conspicuous feature in a case of Fasbender's referred to by Dr. Croom; and though this author tells us that he did not notice anything abnormal about the appendages, yet it is possible that a slight fulness on one side or the other may have been overlooked.

In a fair proportion of the recorded cases of this disorder there has been noted anteflexion, so much so as to give rise to the belief on the part of some that this mittelschmerz is the result of anteflexion; but I think it will generally be admitted that we all know of many cases of anteflexion where there is no mittelschmerz, and there are a sufficient number of cases of middle pain now recorded where there has been sometimes retro- and sometimes anteflexion. In my own four cases the honours are divided.

The pathological interest of this disorder may be practically narrowed down to the question of whether it be due to ovulation and menstruation not being coincident, or whether it be necessary for a tubal lesion to exist.

Dr. Croom has suggested three different classes:

1. Pain existing without any discharge.
2. Pain accompanied by clear discharge.
3. Pain accompanied by coloured discharge.

With regard to the third class of cases, I do not think it need be taken into consideration, for they are probably cases of endometritis in which the discharge of shreds and clots causes painful uterine contractions. But there

remains a number of cases which occur probably to most of us, where the prominent feature is a true mittelschmerz. In many of these cases there has been noted the escape of clear fluid, and in most a fulness, and in some a distinct swelling, which varies in size at different times. I believe that if a careful history of these patients be taken we shall always be able to elicit the fact that there has been a definite cause of inflammation of the endometrium with extension into the tubes. But it may be urged, and rightly, many cases of salpingitis, and even pyosalpinx and hydrosalpinx, occur in which there has been no true definite mittelschmerz. There is of course the pain usually associated with these disorders, wherein it is manifestly tubal but not cyclical; but that is not the character of pain now under discussion. How then are we to account for this periodicity in these cases of mittelschmerz?

It is probably easy to admit that the pain is due in some cases at any rate to an effort on the part of the tube to expel its contents. In three of my cases this expulsion was followed by relief of pain, though this latter fact is not noticed by any authorities I have quoted.

In Sir W. Priestley's remarks upon the pathology of his cases he disregards entirely, and makes no comment upon, the recognised pathological condition of the tubes, but attributes the mittelschmerz to maturation of the follicle not being coincident with menstruation, and he suggests that the pain is induced by activity of the follicle in endeavouring to approach the cortex of the ovary, and that this activity causes a congestive condition of the uterine appendages. The oversight of the fact that in so large a proportion of cases there is some tubal lesion makes us hesitate before accepting the view that it has a purely ovarian origin.

It is suggested that this intermenstrual pain is due to ovulation not being coincident with menstruation, or that the dehiscence of the follicle through a thickened capsule is painful, and that the condition of the tubes has nothing to do with the periodicity of pain.

In answer to that I think the weight of evidence is in favour of some tubal disorder always accompanying this particular character of pain; it may be, and probably is, that in some cases the distension is slight and the discharge proportionately small, and so escapes observation as a prominent symptom; but in many this has been very marked, and a study of the cases shows clearly that in nearly all some alteration of the tubes is noticed; at the same time some cyclical discharge of nerve energy is necessary to account for the marked periodicity. In my case, where I removed the whole of the appendages, the operation was performed—after due deliberation—on account of the serious condition of the patient's health, in consequence of the severe loss caused by the hæmorrhagic fibroids. Nothing is proved except that the patient is cured; in the other case, where the pain and menstruation is arrested by the profound exhaustion of a protracted illness, nothing is proved; and in my other two cases the improvement, if any, is due probably to allaying the irritation in the tubes. Dr. Ritchie, in the discussion following Dr. Croom's paper, attributed the whole of the symptoms to an intermediate discharge of nerve energy. Here I think he attempts to prove too much; for if there were no tubal or ovarian lesion there would probably be no pain, for in a typically normal menstruation, which is due to a discharge of nerve energy occurring at a cycle of twenty-eight or thirty days, accompanied by a manifestation of blood, there is no pain; why then should there be pain at the lesser intermediate discharge of nerve energy?

This is not the occasion to enter into a discussion of the cause of menstruation; but in a paper by Dr. Marsh on "Intermenstrual Phenomena," which appears in the 'American Journal of Obstetrics' for July, 1897, he draws attention to the observations of Dr. Stephenson, of Aberdeen, on the rise and fall of blood-pressure occurring in cycles of twenty-eight days in the pelvic viscera; this rise reaches its maximum every twenty-eight days, and

the menstrual flow is coincident with this maximum; this is followed by a corresponding fall, producing an anæmic condition. This alteration of blood-pressure is due to a cyclical discharge of nerve energy. There is nothing unusual in this periodicity; for there are in most organs periods of activity alternating with periods of rest, for instance, the rhythmical beating of the heart and the rhythmical contractions of the spleen.*

I have no difficulty in accepting the view of Dr. Marsh and Dr. Ritchie that there may be a secondary intermediate wave of pelvic congestion caused by a secondary wave of nerve energy, but in face of the fact that we have but comparatively little evidence of ovarian lesions, and we have plenty of evidence of tubal lesions, I think it is to the latter that we must assign the exciting cause of this intermenstrual pain. There has been a growing tendency to regard many cases of supposed ovaritis as really tubal congestion, and the careful observations made after abdominal sections seem to confirm this view.

In Fasbender's case, whilst he accepts Pfluger's theory of menstruation, he lays marked emphasis upon the copious discharge of mucus, and discovered nothing abnormal about the appendages, and regards the pain as due to a premature summation of nervous stimuli to the ovary, with ovulation as a consequence, induced by a pathological condition of the ovary. I cannot help thinking that there is here also a too great tendency to theorise without due regard to clinical facts; for he has to suppose a pathological condition of ovary, and yet admits he discovered none. This is of course perfectly easy to understand, but he offers no explanation of the flow of mucus.

The precise pathology of this somewhat unusual disorder it is perhaps impossible to determine with our present knowledge, and it is rendered more difficult by our having

* This periodic congestion of the ovaries is illustrated by a case quoted by Priestley, in which the ovaries had descended into the inguinal canal, and every twenty-one days were found to be enlarged and tender for a period lasting three or four days.

no records of post-mortem examinations made with the object of elucidating this question; but it seems to me, in weighing the evidence of observed facts, that the tubes play a very important if not an essential part. An examination of the thirteen cases which have been recorded shows that in no less than ten there has been a distinct tubal lesion—in some a marked swelling, in others a fulness; and excluding Sir W. Priestley's cases, where no comment is made, of the remaining nine I find that in six there is a note of a mucous discharge, and in two cases in which the tubes have been removed hydrosalpinx has been observed. We cannot, therefore, look upon the ovaries as the sole offenders; I think we must come to the conclusion that there are a certain number of women who, from some cause or another, have developed a tubal lesion, and being subjects in whom the physiological cycle of pelvic congestion occurs with increased frequency, there is painful effort on the part of the tube to expel its contents.

Case.	Name of observer.	Condition and position of uterus.	Clinical note of appendages.	Condition found at operation.	Nature of discharge (if any).
1	Sir Wm. Priestley	Not noted	Elastic swelling in broad ligament	None	None noted.
2	,,	,,	,,	,,	,,
3	,,	,,	Fulness in region of broad ligament	,,	,,
4	,,	,,	,,	,,	,,
5	Fasbender	Anteflexion	Nothing abnormal observed	,,	Copious clear mucus.
6	Croom	Normal	,,	,,	None noted.
7	,,	Enlarged to 3½ inches; submucous fibroid	—	Right ovary cystic; tube thickened; left ovary normal; hydrosalpinx	Sometimes clear, sometimes blood-stained.

Case.	Name of observer.	Condition and position of uterus.	Clinical note of appendages.	Condition found at operation.	Nature of discharge (if any).
8	Croom	Enlarged; retroflexed	—	On left side hydrosalpinx	—
9	Marsh	Retroflexion and endometritis	"Inflamed ovaries;" tubes not noted	None	Mucous discharge.
10	Addinsell	Anteflexion	Elongated swelling in left broad ligament; left ovary tender; right normal	„	Copious mucous discharge.
11	„	Retroflexion; enlarged to 4½ inches; several fibroid nodules	—	Left ovary prolapsed and matted to uterus; tube found much thickened after removal	„
12	„	Retroflexion; fibroid nodules	Soft elastic swelling in left broad ligament	None	Frequent discharges of clear watery fluid.
13	„	Anteflexion	Fulness in right broad ligament	„	Slight, clear, and watery.

Dr. HERMAN believed that this was the first time that the subject of so-called "intermediate dysmenorrhœa" had been discussed by the Society. He agreed with Dr. Addinsell in thinking that it was incorrect to apply the term "dysmenorrhœa" to a pain which only occurred when the patient was not menstruating. At the same time he did not think they need resort to German for a name. "Middle pain," the literal translation of "Mittelschmerz," he did not think a happy coinage. "Intermediate monthly pain" was a correct designation of the symptom. He had not, like Dr. Addinsell, found that the pain always recurred fourteen days after menstruation. He had found that the date of its recurrence varied. The feature common to all the cases was that the pain recurred on a fixed day between menstruations; the patient knew when to expect it; it always recurred on or about the same day in the same patient, but it recurred on different days in different patients. He was accustomed to accept the explanation of the pain put

forward by Sir W. Priestley, viz. that it was due to monthly recurring painful ovulation. The evidence of abdominal sections showed that Graafian follicles might ripen and burst at any time of the menstrual cycle, although they usually burst near the time of menstruation. In most of the cases he had seen, as in Dr. Addinsell's cases, there were physical signs of old inflammation of the uterine appendages. In most such cases there were adhesions around both ovary and tube; and it was not possible to say that the tube was diseased and the ovary healthy. In most of the cases he had seen the pain had the characters of ovarian pain, a dull aching or burning continuous pain referred to the situation of the ovary. If the ovary were surrounded by adhesions, that offered a ready explanation of why ovulation was painful. He thought that for diseased and distended tubes to empty themselves into the uterus was a very rare event. When at operations such tubes were pulled up, and so straightened out and even pressed upon, any lessening in their size by passage of their contents into the uterus was a thing hardly ever, if ever, seen. In the case described by Dr. Addinsell in which this was supposed to have happened, the size of the swelling by the side of the uterus showed that the retained fluid could only have been a very small quantity. It was common for increase in leucorrhœal discharge to accompany intermediate pain. He had seen one case in which the intermediate pain was evidently due to uterine contractions. The patient had fibroids; the pain was like that of spasmodic dysmenorrhœa, except that it was not present when the patient was menstruating; it was made worse by ergot, was a little relieved by bromides, and was removed by dilating the cervix. After a few months it returned, and was again cured by a repetition of the dilatation. He could offer no explanation of this case. He had seen other cases of intermediate pain without any physical signs of disease of the uterus or its appendages. He thought the Society was indebted to Dr. Addinsell for his careful, laborious, and thoughtful paper.

Mr. Bland Sutton remarked that Dr. Addinsell's paper interested him especially on account of the effort to associate the pain with lesions of the Fallopian tubes. He had long held the view that fluid distensions of the tubes did not discharge themselves into the uterus, and the old notions of intermitting hydro- and pyosalpinx were not sustained by reliable evidence. It was of course impossible to say that fluid from a distended tube never escaped into the uterus, but he was convinced that it was of very exceptional occurrence. Very free discharges of fluid may and do take place from the vagina, but that was no reason for attributing their origin to the Fallopian tubes. Dr. Addinsell's paper would serve a useful purpose, for it is clear that intermenstrual pain has not received the clinical

recognition it needed, and now attention had been so prominently directed to it, some light would perhaps soon be shed on its causation.

Dr. Amand Routh saw no difficulty in explaining this intermenstrual pain if once it could be assumed that in certain cases there was an intermenstrual cycle as well as a menstrual one. All that was then required was to have some pelvic organ, such as a distended tube, an ovary with thickened capsule, or a growing encapsuled fibroid, for in each case the pain of increased *tension* would be present. He had now under observation a lady with small multiple fibroids, with this intermenstrual pain occurring ten days before the "period," and in her case he was able to prove by vaginal examination that the fibroids underwent an increase in size and tension both at the menstrual and, more markedly, at this intermenstrual epoch.

Dr. Boxall was of opinion that we are far from being able at present to fix the cause of intermenstrual pain on any one pelvic lesion. He instanced a case in which periodic intermenstrual pain, commencing fourteen and ceasing three days before each period, was a marked feature. No intermenstrual discharge was noticed in association with it. In that case the uterus at first was unusually small and anteflexed and low in the pelvis, the patient sterile. Four years after marriage the cervix was dilated under an anæsthetic. The prolapse was corrected by wearing a pessary for a short time. The pain was for a time relieved. Subsequently both ovaries were found to be prolapsed but not enlarged, and the uterus was retroverted, but there was from first to last no sign of tubal disease. The pain returned, but again disappeared as the tone of the pelvic organs was regained. Two and a half years after the dilatation this lady became pregnant, but miscarried. Before this it was noticed that the uterus was irregularly enlarged by a fibroid, and the periods were somewhat excessive. The fibroid enlargement persists. The patient is now pregnant again, and has nearly reached the full time; but since her previous miscarriage she has had little or no intermenstrual pain. The permanent disappearance of the pain in this case appeared to be due to improvement of tone in the pelvic organs associated with a general improvement in health.

Dr. Heywood Smith said that, in spite of what had fallen from previous speakers, looking to the list of cases and noting that in the majority there was some lateral swelling and also the evacuation of some fluid, he considered the disease under consideration was associated with intermittent tubal hydrorrhœa. The oviduct during menstruation was not only swollen, but its lumen was enlarged, becoming then the seat of inflammation; in these cases the inflammation did not go on to the extent of closure of the ends of the oviduct, such as took place in cases of

hydrosalpinx, but the fluid thrown out had a way of escape by the uterine orifice. In these cases, however, or the majority of them, there existed some condition of flexion. What took place then was that the flexion, altering the relative position of the oviduct, produced a kink at the junction of the oviduct and the uterus, thereby preventing the free escape of the fluid and giving rise to the pain, until its accumulation partly straightened out the oviduct and allowed the fluid to escape. A case came under his observation some years ago where there was a distinct swelling in one lateral *cul-de-sac*, which, after the evacuation of some fluid discharge *per vaginam*, used to disappear. In this case he removed the appendages, and the case was cured.

Dr. ARTHUR GILES thought that the name "intermenstrual pain" was not altogether a happy one, as it rather suggested that the pain in question had something to do with menstruation or ovulation, which was an hypothesis by no means proved. He was inclined to look at it from another point of view, and to dwell on the facts which came out in Dr. Addinsell's table, viz., firstly, the almost constant association of this pain with tubal mischief, or at least with a condition pointing to disease of the annexa; secondly, its frequent and remarkable association with a copious watery discharge from the uterus. True, the condition of intermittent hydrosalpinx was, as Mr. Sutton and Dr. Herman had pointed out, very rare; but there were cases where the discharge could not well be explained on any other supposition. If a condition of intermittent hydrosalpinx were present, it was not unreasonable to suppose that the swelling of the uterine mucosa during menstruation might lead to temporary occlusion of the uterine ostia of the tubes. Consequently the secreted fluid would accumulate, leading to pain due to distension of the tube. It would take some days for a distension to occur sufficient to cause pain. Once the congestion of the mucosa had subsided after menstruation had ceased, the temporary obstruction might be relieved, with the result of a discharge of clear fluid and cessation of pain. In this way the rhythmical character of the pain would be sufficiently accounted for, without falling back on the somewhat difficult supposition that ovulation was painful. It was, however, clear that more observations of this interesting condition would be required before any pronounced opinions could be held concerning it.

The PRESIDENT congratulated the author of the paper on having brought forward a very interesting subject. It was evident, both from the paper itself and the remarks of the various speakers who had taken part in the discussion, that the cause of the phenomena described was still far from being understood. None of the theories that had been put forward appeared satisfactory. Taking, for example, the theory that the pain was due to tubal distension, and the serous vaginal dis-

charge to escape of the contents through the uterine end of the tube, he would not say that this never took place, but we had as yet no indisputable evidence of such an occurrence. If it ever did occur it must be an event of extreme rarity. The author had stated that "in nearly all the recorded cases a tubal lesion is present, which he believes to be salpingitis proceeding to hydrosalpinx." An examination of the table did not seem to warrant that statement. In only three out of the thirteen cases were the tubes known to have been diseased. In one of these three one tube was thickened, in one both tubes were thickened, and in the third there was a hydrosalpinx. In two cases there was no abnormality of any kind observed. In one case the ovaries are said to have been inflamed, and the condition of the tubes was not noted; whilst in the remaining seven the presence of a tubal lesion was a mere matter of inference, some fulness or an elastic swelling having been discovered in the region of the broad ligament. The association of salpingitis with the phenomena, therefore, rested on a very slender basis. With regard to the discharges of clear fluid from the vagina, he would, without in any way impugning their genuineness in the cases cited, point out that such discharges should not too readily be regarded as having any pathological significance, or we might be led into fallacies. He mentioned cases in illustration. In one the discharge proved to be urine, in another plain water that had become pent up in the vagina whilst the patient was in her bath. He suggested that the table might with advantage be altered so as to show in separate columns the physical signs and the conditions actually seen during operation or in the post-mortem room. These were at present included under one heading. Their diagnostic value, however, was so different that they should be tabulated separately. The paper and discussion would no doubt arouse interest in the subject, and lead to further investigation.

Dr. Ewen Maclean asked Dr. Addinsell if he had had opportunity in any of his cases of examining during the menstrual period, and if so, were the physical signs at that time similar to those found at the time of the mittelschmerz. If such a similarity did exist, it was possible some of these cases might be regarded as an attempt at double menstruation resulting from the overlapping of two menstrual cycles. Such anomalies had been definitely traced in the varying types of ague.

Dr. Addinsell thanked the President for his suggestions as to the alteration of the table of cases, and he undertook to arrange a separate list which would show at a glance the cases supported by clinical evidence only, and those in which an operation had been performed. He shared the scepticism of the President as to placing any reliance upon the patient's description of vaginal discharge, and he fully recognised the importance

of the criticisms of Dr. Herman, Mr. Bland Sutton, and the President with regard to the question of the patency of the uterine ostium and the possibility of the fluid contained in a dilated tube passing through the ostium into the uterus and out by the vagina. As he understood the position, these three authorities denied this possibility, or at any rate thought it extremely rare; with this view Dr. Addinsell could not agree. He had satisfied himself, after very careful examination, that a swelling existing on one or other side of the uterus might, and in his experience in some cases did, disappear after the copious discharge of clear mucus accompanied by pain. He cited a case, reported by Dr. Galabin in the 'Transactions' of 1893, in which a recurrent hæmorrhagic discharge was present, and where a swelling appeared and disappeared. He maintained that the patency of the uterine end of the Fallopian tube was fully recognised by competent observers; and he quoted Dr. Griffith and others who had demonstrated this condition. In his opinion the case quoted by Mr. Sutton was not germaine to the point. In the cases under his own observation he failed to see how the phenomenon could be explained by any other hypothesis than the one he had suggested, and he was supported in this view by the fact that in the one case he had operated upon the tube was found to be distended and thickened. He admitted that the evidence was inconclusive in regard to recorded cases verified by operation and post-mortem examination, but he maintained that the few cases that had been operated on and the whole of the clinical evidence were entirely in his favour.