Suid-Afrikaanse Tydskrif vir Geneeskunde
South African Medical Journal

Posbus 643, Kaapstad — P.O. Box 643, Cape Town

Kaapstad, 8 Maart 1958 Weekliks 2s. 6d. — Vol. 32 No. 10 — Cape Town, 8 March 1958 Weekly 2s. 6d.

MITTELSCHMERZ OR OVULATION PAIN *

G. P. CHARLEWOOD, F.R.C.S. (EDIN.), F.R.C.O.G.

Johannesburg

The purpose of this paper is to draw the attention of the profession to the fact that large numbers of young women are being operated on unnecessarily for appendicitis with mutilation of a healthy ovary, when the true diagnosis is ovulation pain or 'Mittelschmerz.'

Incidence of Ovulation Pain. It is estimated that between 15% and 40% of women suffer from this condition (McSweeney and Fallon, 1950). It occurs in these women almost monthly and therefore is much commoner than the common cold. There is no information available regarding the incidence in Bantu women, but my experience in out-patient clinics is that Bantu women rarely complain of it—possibly because they are more stoical.

Symptoms. The attacks take place usually at the mid-cycle, but may occur any time between the 7th and 24th days of the cycle. They do not necessarily occur every month. These pains, like dysmenorrhoea, are not as a rule experienced until a few years after the menarche, i.e. until true ovulatory cycles have been established. The young woman is then surprised by a pain which may vary between a mild ache and an agonising, shocking pain. It is present in one or other iliac fossa, usually the right. In some cases a mild backache may be present. The pain is most often bearable but the patient and her parents are worried about the danger of appendicitis, of which condition they have heard on countless occasions; the much commoner mittelschmerz has not been publicized. Usually the pain subsides within a few hours, but in some patients, especially those who have suffered meddlesome surgery to the ovary, the pain may continue until menstruation begins. It was this type of patient that O'Donel Browne (1949, 1950) had in mind when he described 'ovarian dysmenorrhoea'.

A few patients, relatively rare, bleed freely from the corpus luteum at the time of ovulation and suffer generalized abdominal pain and distension with a raised temperature. There must be few gynaecologists who have not, at some time, diagnosed such a case as an ectopic pregnancy. Some patients may present with such symptoms month after month. This condition should be regarded as a separate clinical entity, viz. corpus luteum haemorrhage, rather than true mittelschmerz.

Aetiology. The exact mechanism of the production of mittelschmerz has not been established. Of various theories the most likely is that there is raised intra-ovarian tension immediately before ovulation. The fact that similar pain can be elicited by bimanually compressing the ovary strongly supports this view.

Diagnosis.

The patient herself unfortunately seldom recognizes the fact that her pain is related to the menstrual cycle. Where the pain is on the right (the usual side) she generally suspects appendicitis. This diagnosis is suggested to her doctor, who usually agrees. He has been taught to be on his guard against appendicitis, whereas he has scarcely heard of ovulation pains; he can therefore hardly be blamed.

On the other hand, the practitioner (all too rare at present) who appreciates the probabilities involved will be at pains to exclude the common mittelschmerz before considering the proportionately rare appendicitis. The possibility that the pain might occur every month at mid-cycle has to be suggested to the patient. Even then many will say that they have never noticed and cannot say. The next enquiry to make is whether the pain ever occurs during menstruation. On this point sufferers from mittelschmerz can always definitely answer 'No'. Such a reply is almost diagnostic, since other lower abdominal pains are either worse during menstruation or are unaffected by it. The diagnosis is then confirmed by bimanually compressing the ovary, which reproduces the pain of which the patient complains.

TREATMENT

It is almost a tradition in operative surgery that incisions for appendicitis in women should be planned in order to deal with alternative adnexal pathology. In endless numbers of cases this procedure is adopted for mittelschmerz. A

* A paper presented at the South African Medical Congress, Durban, September 1957.

normal appendix is removed and the 'pathology' in the ovary (a corpus luteum, normal follicle or harmless retention cyst) is dealt with by taking a wedge out of the ovary, or even completely removing it. It is a fact which I have confirmed from the operation register of a Reef hospital that in some quarters the commonest operation in young women is appendicectomy with removal of a portion of an ovary. In the 14-25 age-group appendicectomy at this hospital was more than twice as common in women as it was in men. In the minority of cases, where the ovulation pain is left-sided, the patient is less likely to suffer unnecessary mutilation.

An astonishing feature of the post-operative history is that the patient does not blame the doctor when the pain recurs often in a more persistent form. Such is the power of suggestion associated with any operation that the patient now thinks it is a new pain which afflicts her—possibly cancer! 'Surgery begets surgery' is an old saying, which should read, 'Bad surgery begets surgery'. Now our patient is liable to have operations for adhesions or for more cysts, or a ventrisuspension or removal of an ovary, etc. and eventually hysterectomy!

The following is the history of a badly mismanaged case —admittedly more disastrous than most, but none the less typical.

The patient, a married woman aged 35 without children, had started complaining of right-sided pains at the age of 17. These on careful consideration of her history, were obviously ovulation pains, but they were never diagnosed as such. Instead, an appendicectomy was performed, with removal of a 'cyst'.

When pains recurred an operation for adhesions was carried out. This was followed over the next 10 years by operations for further cysts, cholecystectomy, ventrisuspension, and finally hysterectomy—but leaving the patient with her ovaries. Unfortunately the pains continued, rather irregularly now, but more severely.

The urologists were next called in and carried out full investigations, which proved negative. The patient was then referred to a psychiatrist, who gave her shock therapy, with negative results. In despair the patient was referred to a gynaecologist, to whom it was clear that the pain had always been an ovulation pain.

It was decided to remove the offending right ovary, which could be felt on pelvic examination as a tender cystic mass the size of a golf ball. At laparotomy such dense adhesions were found that it was feared that the closely adjacent ureter or bowel might be injured, and so the ovarian vessels with their nervous accompaniments were divided (as will be discussed presently) and the ovary was left amongst its dense adhesions. The patient unfortunately developed post-operative intestinal obstruction, for which she had her abdomen reopened by a general surgeon. She made a slow and stormy recovery, with final disappearance of her ovulation pain. Subsequently she developed an incisional hernia which necessitated yet another and (one hopes) a final operation.

Once the correct diagnosis has been made the treatment is obvious and easy. The true nature of the pain is explained to the patient, who is then quite willing to tolerate even quite severe pain with the help of an analgesic if necessary. She is told the pain will finally disappear with the menopause and that it is a sign that normal ovulation is occurring.

In a very small minority of cases, especially where the pain has become unbearable after surgical mishandling, or where there is doubt whether endometriosis etc. may be present, a laparotomy may be necessary. If no genuine ovarian pathology is present an ovarian neurectomy should be performed (O'Donel Browne, 1949, 1950; Henrickson, 1941). This entails dividing the sympathetic and parasympathetic nerves in the infundibulo-pelvic ligament. The only practical way of doing this is to divide the whole ligament, including the ovarian vessels. This does not interfere with subsequent ovarian function because the uterine vessels which anastomose with the ovarian are intact. As it is possible that some of the sympathetic and parasympathetic nerves may ascend by way of the presacral plexus, it is advisable to do a presacral neurectomy at the same time.

In all, 7 cases have been treated by the author by ovarian sympathectomy, 3 of them in combination with presacral neurectomy. The results have been uniformly good.

DISCUSSION

Why is such a well-recognized condition as mittelschmerz pain, of which the attacks are much more prevalent than the common cold, so poorly handled by our profession? The fault lies primarily with the medical schools, where the condition has never been given the emphasis it deserves. All competent surgeons and gynaecologists are aware of the condition but even with them it is not always uppermost in the mind when a young woman complains of obscure abdominal pains. Many well-known text-books on gynaecology and surgery do not even mention the condition. It should be drummed into all students that in lower abdominal pain in a young woman the diagnosis should never be made without first carefully excluding ovulation pain. In this way thousands of unnecessary and mutilating operations could be avoided. It would also be an excellent thing if writers on medical matters in the lay press and speakers on the radio were to give this ubiquitous condition their attention.

SUMMARY

Mittelschmerz or ovulation pain occurs in approximately one-third of all women. Its attacks are therefore much commoner than the common cold. It is nevertheless misdiagnosed and mishandled in a high proportion of cases, often with disastrous results. The fault lies primarily with the medical schools, where students should be taught to exclude ovulation pain in all young women with lower abdominal pains before considering any other diagnosis.

REFERENCES

Browne, O'D. (1949): Amer. J. Obstet. Gynec., 57, 1053.
Idem (1950): *Modern Trends in Obstetrics and Gynaecology*, pp. 707-710. London: Butterworth.
Henrickson, E. (1941): Western J. Surg., 49, 1.
McSweeney and Fallon (1950): Amer. J. Obstet. Gynec., 59, 419.