

## A Case Of Endometriosis

### Case Report:

Regd: No. 394A: M.L. Chinese. Age 29 years. SN/3732/56/GY.

Nulliparous.

Married 3½ years.

Husband alive and well.

Menarche 13 years.

Menstrual period — 28 days; duration 3 to 4 days. (Had a period of amenorrhoea during Japanese Occupation whilst being interned).

L.M.P. = 23.7.56 — 28.7.56.

### Chief Complaint:

Unable to conceive. Anxious to have a child.

No history of cough or fever.

### Past History:

(1) Had chicken-pox in July 1955. Since then she lost some weight which has never been regained.

(2) Had Malaria at the age of 10 years.

### Clinical Exam:

General condition good. Thin. Not anaemic.

Head and neck N.A.D.

Heart — Dual rhythm, no murmurs.

B.P. = 130/80.

Lungs — clear.

Abdomen — soft. Liver and spleen not palpable. Tense cystic mass palpable in the lower abdomen; globular, centrally placed, height up to umbilicus.

### Vaginal Exam:

Cervix healthy.

Uterus — retroverted; pushed into Pouch of Douglas by Mass anteriorly and incorporated with abdominal mass. Immobile.

### Clinical Diagnosis:

Ovarian cyst.

### Treatment:

Operation done on 10.8.1956 at 10 a.m.

### Found:

- (1) A large right ovarian cyst, size of of a foetal head, containing straw-coloured fluid.
- (2) Endometrioma at base of right ovarian cyst, with small daughter cysts, size of a pigeon's egg in another part of capsule of ovarian cyst.
- (3) The left ovary was sclerocystic.
- (4) Diffused endometrial cyst in Pouch of Douglas and in vesico-cervical pouch.
- (5) Uterus retroverted, being bound to rectum by adhesions.

### Done:

- (1) Right ovarian cystectomy.
- (2) Uterus freed from rectum and ventri-suspension done.
- (3) Cysts of left ovary punctured.
- (4) Patches of endometrial cysts in Pouch of Douglas and vesico-cervical pouch snipped with scissors and toilet of the areas performed.

### Discussion:

DR. T. H. LIOK: Presented the case, and gave a short talk on the aetiology of endometriosis.

The aetiology of endometriosis is still unknown for no one knows the reason why the condition occurs. Rather the theories advanced by various authorities deal with the origin and the manner in which endometriosis reach their destinations.

(I) *Theory of Direct invasion.* This is supported by Cullen (1908), who described his "Diverticular Theory" in 1908. This theory is generally accepted as the explanation for the occurrence of uterine

endometriosis or adenomyosis. However, Direct Invasion is inadequate to explain the appearance of endometrial tissue in sites remote from the uterus.

(II) *The "serosal" theory.* Ivanoff in 1878 and later Robert Meyer, postulated that, under certain conditions the peritoneal mesothelium undergoes metaplasia and becomes converted into high columnar epithelium. This is seen particularly in inflammatory lesions in the pelvis and, even in ectopic gestation. The peritoneum, as one knows, is developed from the same embryonic structure as the uterine mucosa and granulosa cells of the ovary. The serosal theory in this way accounts for all forms of adenomyosis and endometriosis, even the rare tumours of the umbilicus, endometriosis in hernial sacs and even laparotomy scars, when it is assumed that the peritoneal mesothelium grows into the scar tissue. It is difficult to produce conclusive evidence in support of this theory but histological investigations definitely favour the serosal theory. The objection to this theory is that no one has yet seen transitional forms between the peritoneal and the metaplastic endometrial tissues.

(III) *Sampson's Implantation "Spill" theory.* This theory supposes that during menstruation, endometrial cells pass back through the Fallopian tubes into the peritoneal cavity and get implanted on ovaries and other structures in the pelvis. Sampson has presented a formidable mass of evidence in support of this theory. By injection and grafting experiments, it can be demonstrated that endometrium can be implanted on to the peritoneum. During pregnancy, a decidual reaction comparable to that found in endometrium has been demonstrated in the stroma of these heterotopic endometrial proliferations. Again, secretory hypertrophy can usually be demonstrated in the affected areas during the menstrual cycle.

An objection to this theory is that if the theory is true all women with regurgitant menstruation should have pelvic endometriosis and this is certainly not the case. Furthermore, the viability of endometrial tissue cast off during menstruation has been denied by Novak (1926) and by Nicholson (1926).

(IV) *Lymphatic theory.* The theory supposes that endometriosis arises by lymphatic spread from the uterus in much the same way as a malignant neo-

plasm spreads and metastasises by the lymphatic system. The similarity between the sites of metastasis of carcinoma of the body of uterus and those of endometriomata is very close, e.g. the ovary is in direct lymphatic communication with the uterus and being an "end-organ" is frequently the site of secondary carcinomatous deposits especially when the primary growth is in the uterus. The rectum and recto-colic junction, the bladder and the lower end of the ureter are so close to the uterus that no great distance along the intertissue spaces has to be traversed. The appendix, colon and small intestines are in communication through their mesenteries with the retroperitoneal tissue, of which the parametrium forms a part.

The hypothesis seems to be adequate in covering all known facts and some authorities think that lymphatic spread is the most logical explanation of the theory of origin.

(V) *Hormonal theory.* The modern view of the aetiology of endometriosis is that it is caused by some abnormal hormonal influence. What exactly are the hormonal factors no one knows.

Meigs (1948) maintains that endometriosis is caused by prolonged hyperoestrogenism and that the higher social classes are affected most because they have late or infrequent pregnancies.

DR. C. S. OON: Commented on the symptoms, diagnosis and treatment of endometriosis.

Prevention:

Joe Meigs (1948) stressed the importance of late and infrequent child-bearing as an important cause of endometriosis and so suggested that financial aid be given by American parents to their children to enable them to marry young and have children early. He even suggested that workers should be paid more in early life and that there was no need to increase their salaries as they grow older.

*Surgical treatment* depends upon the severity of the symptoms, the site and extent of the lesion, the age and the general condition of the patient and the need for preservation of the function of child-bearing and/or menstruation. Further, it is to be remembered that the growth and invasive properties of the endometrium is dependent upon continued ovarian function. There is evidence that growth ceases and atrophy takes place

after surgical or irradiation castration. Nevertheless, Scott and Te Linde in their series in 1950 showed a conception rate of 40.6% in 64 women treated by conservative surgery, indicating that conservation of young patients.

Thus, the treatment of endometriosis in certain situations, or at the end of the child-bearing period of life presents no difficulty. But, when it causes severe symptoms in young patients anxious to bear children, it may tax the ingenuity of the surgeon to the utmost.

In dealing with ovarian endometriosis in the younger women, the main principle is conservation of ovarian tissue. They may recur, but the risk of having to open the abdomen again is worthwhile seeing that sterility is usually the main complaint of these patients.

Uterine adenomyosis may occasionally be dealt with by local excision, but in most cases the lesion is usually so diffuse that hysterectomy is the only answer.

Endometriosis in the Pouch of Douglas in a patient complaining of sterility but with no other symptoms, is not an indication for surgery as with expectant treatment the patient may conceive and the lesion will disappear.

Endometriosis of the rectovaginal septum presents a difficult problem as the lesion is usually so extensive as to involve the rectum or perforate the vaginal fornix. Symptoms are often severe and it may be necessary to remove the uterus with the affected part of the vaginal vault if possible. However, the risk of injury to the rectum is considerable and sometimes the rectum may be so extensively involved that the only surgical procedure capable of removing the growth is an abdomino-perineal excision. In such cases oophorectomy even in the younger women is permissible.

Intestinal endometriosis may be so difficult to differentiate from carcinoma even when the abdomen is opened that it would be wise to resect the loop of gut whenever there is any doubt. In the over forties, it may be possible to modify treatment of undoubted endometriosis by oophorectomy and thus avoiding extensive surgery.

Treatment of endometriosis of the bladder, ureters and lung depends mainly upon the age. In the younger patients radical resection is preferable whilst in the

older age group, castration by surgery or irradiation is often followed by regression of the tumour and disappearance of symptoms.

Isolated endometriosis in laparotomy scars, round ligament umbilicus or perineum is best dealt with by local excision.

Presacral neurectomy for relief of dysmenorrhoea of endometriosis of the central type in those cases treated by conservative surgery has been advocated by Meigs. He suggested that the neurectomy should be done before the endometriosis is disturbed to prevent spilling into the retroperitoneal wound. Cooke (1939) advocate cutting the infundibular pelvic ligament to denervate the ovary in lateral pain, but as this destroys 2/3 of the ovarian blood supply, this is not to be advise.

*Radium and X-Rays* are contraindicated in most of the patients except the over forties. Even then, in most of these patients, a laparotomy would have been performed when removal of the ovaries could have been done at the same time. It may be useful in those cases where conservative surgery has failed and it is desirable to induce menopause.

#### *Hormone therapy:*

Androgens have been used for the control of endometriosis in recent years by Hirst (1947) and Schmitz and Towne (1948). Their claims however have not been universally accepted, but I do support them as I did treat a case of endometriosis of the rectovaginal septum some years back with success. Hirst advocates 150-225 mgm. of testosterone propionate in oil injected intramuscularly over 2-3 weeks followed by methyl testosterone 10 mgm. daily up to a period of 3 years or even over.

Karnaky (1948) advocates the use of continuous large doses of stilboestrol. The purpose is to keep the patient amenorrhoeic for 3-6 months, during which period the growth is supposed to regress. He observed that large doses of stilboestrol do not stimulate the growth whilst small doses do. There appears to be some difference of opinion as Meigs (1948) believes that small doses of stilboestrol for relief of menopausal symptoms after castration for endometriosis will not stimulate the growth.

PROF. B. H. SHEARES: Said that in endometrioma of the ovary the pathological

report did not correspond with the findings at operation possibly because the specimen was not carefully examined. Further it was difficult to find endometrial tissue in the wall of the sac. The answer was to make serial sections. Novak said that it was rare to find endometrial glands in the ovary.

DR. C. S. SEAH: Added that according to Novak, pressure of the cyst contents tended to destroy the endometrial glands.

DR. A. C. SINHA: Thought that if the cyst was discovered early enough then it might be possible to find endometrial tissue.

DR. T. K. CHONG: In discussing treatment, said that breaking of the pituitary-ovarian-endometrial relationship by removing the uterus in the 30-40-year group was considered by some to be better than removing the ovaries, in an attempt to prevent recurrence of endometriosis.

DR. A. C. SINHA: Said this was contrary to the efforts to promote pregnancy.

DR. C. S. OON: Said that Josephine Barnes and Allen Brews reported a case of endometriosis of the pleura who finally had to be castrated before her symptoms of haemothorax could be alleviated.

PROF. B. H. SHEARES: Commented that in endometriosis the lungs should be carefully examined for endometrial deposits.

DR. A. C. SINHA: Said that this brought in the question of vascular spread of endometriosis to the lungs as in chorion epithelioma.

DR. C. S. OON: Mentioned that MacLeod supported lymphatic spread to the lungs.

DR. A. C. SINHA: Pointed out that not all endometrial cysts produced symptoms—some might be symptomless. At the other end of the scale, endometriosis might produce extensive adhesions leading to protean symptoms. Endometriosis was a disease which might be arrested at any time.

How could the pain in endometriosis be accounted for?

PROF. B. H. SHEARES: Stated that pain was not present in every case of endo-

metriosis. If the endometrial cyst was entirely encapsulated, no spill occurred into the peritoneal cavity, and therefore there was no pain. The pain in endometriosis was caused by a chemical peritonitis resulting from spill into the peritoneal cavity. Endometrioma of the ovary was originally called "perforating cyst of the ovary" (Sampson).

DR. A. C. SINHA: Mentioned that the pain should therefore be of short duration. The cysts were thought to perforate at the time of ovulation.

PROF. B. H. SHEARES: Differentiated endometriosis from a pelvic inflammatory mass in that it was more tender probably because the blood in the cyst was under tension.

DR. A. C. SINHA: Asked the house for its opinion on stromatous endometriosis (Goodall) in which the stromal reaction out-witted the endometrial growth.

DR. C. S. SEAH: Said this was a misnomer. The condition was probably an inflammatory reaction resulting in a collection of lymph nodes in the stroma.

DR. J. W. F. LUMSDEN: Said he was unable to see how lymphatic spread could produce endometriosis in all the known sites.

PROF. B. H. SHEARES: Mentioned Carl Javert of Cornell University as having demonstrated endometrial cells in lymphatic channels and glands.

DR. C. S. SEAH: Related experiments on monkeys where the uterus was turned inside out so that menstruation occurred into peritoneal cavity, and again into the anterior abdominal wall. Endometriosis occurred at both these sites.

DR. T. K. CHONG: Raised objection to the theory of lymphatic spread in endometriosis because the lymph nodes were not involved in endometriosis.

DR. C. S. OON: Mentioned treatment of endometriosis with testosterone.

PROF. B. H. SHEARES: Meigs said he was against the use of contraceptives because it prevented child-bearing and hence favoured the occurrence of endometriosis.