

# Scar Endometriosis

Padmanabhan Laxmi Devi, Mhaskar Rita, Mhaskar Arun

Department of Gynecology, St. John's Medical College Hospital, Bangalore - 560 034.

**Objective** - To analyse the clinical features and histopathological findings of women with scar endometriosis.

**Methods** - A retrospective analysis of 72 women with scar endometriosis was done. **Results** - The age of the patients ranged from 22 - 45 years. The preceding surgery was episiotomy in three of the patients; hysterotomy with sterilization in three; LSCS in two and tubal ligation in four. The interval between the preceding surgery and onset of symptoms varied from three months to six and a half years. Of the eight patients who underwent surgical treatment, one had recurrence. Hormonal therapy was tried in four patients.

**Key words** : scar endometriosis

## Introduction

Endometriosis is the presence of endometrial tissue (glands and stroma) outside the uterine cavity. Both pelvic and extrapelvic endometriosis have been described. Extrapelvic endometriosis has been reported in the lungs, extremities, skin, CNS, GIT and urinary tract<sup>1,2</sup>. Extrapelvic endometriosis occurring in the surgical scar is relatively rare and only of late it has been recognized as a clinically significant entity. Recently we had a case of scar endometriosis and this encouraged us to do this study.

## Materials and Methods

A retrospective analysis of case records of 12 patients with a clinical/pathological diagnosis of scar endometriosis was done. The study period was from September 1982 to March 2000.

## Results

In our series the age ranged from 22-45 years. The interval between the preceding surgery and the onset of symptoms varied from 3 months to 6½ years. The most common symptom was the presence of a painful nodule. Out of the 12 women 8 underwent wide excision of the lesion and one of them had recurrence. She was later put on hormonal treatment. Hormones (danazol / medroxy progesterone acetate) were given to three other patients. Five patients were lost to follow up. In one case FNAC was done prior to surgery. Three patients had evidence of pelvic endometriosis. (Table 1)

## Histopathological findings

Microscopic sections of the excised tissue showed fibrocollagenous tissue with foci of endometrial glands

surrounded by stroma. Some of the glands showed cystic dilatation. Decidual reaction was seen in the scar excised at the time of caesarean section. Also evident were areas of hemorrhage (both fresh and old) lymphocytic infiltration and haemosiderophages.

## Discussion

Endometriosis of the surgical scar commonly occurs after surgery on the uterus and tubes. It is known to occur after hysterotomy, tubal ligation, caesarean section and episiotomy. In the present series three (25%) women developed scar endometriosis after episiotomy, four (33.33%) after tubal ligation, two (16.66%) after LSCS (of which one was with concurrent sterilization) and three (25%) after hysterotomy with sterilization. Of the two women who had developed the lesion after LSCS one had undergone the surgery for placenta praevia. When cesarean section is done for placenta praevia more of decidual tissue may come into contact with the abdominal wound and this in turn may predispose to the development of scar endometriosis. There is also a risk for prematurity associated with placenta praevia and it has been proposed that deciduas of early pregnancy have more capacity to transplant when compared to that of late pregnancy. The other patient who developed scar endometriosis after LSCS conceived while on hormonal therapy and the scar excised at the time of the second LSCS showed evidence of decidual change. Decidual change has been reported in other studies also<sup>3,5,6,7</sup>.

Scar endometriosis is believed to be the result of direct inoculation of the abdominal fascia or subcutaneous tissue with endometrial tissue<sup>8</sup>. Because of the diminished vascularity of the subcutaneous tissue these endometrial implants are less affected by macrophages<sup>9</sup>. The transplanted endometrial tissue in response to the hormonal changes, bleeds into confined spaces which gives rise to pain the most common symptom of scar endometriosis<sup>3</sup>. In our series 10 out of 12 (83.33%) women complained of pain either continuous or with

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Correspondence :

Padmanabhan Laxmi Devi

St. John's Medical College Hospital, Bangalore - 560 034.

Table I : Reported Cases

SI. No.	Patient	Age	Previous Surgery	Interval	Symptom	Treatment
1.	Mrs. G.	33	Episiotomy	1 1/2 yrs	Nodule with cyclical pain	Wide excision
2.	Mrs. A.	26	Episiotomy; manual removal of placenta	6 months	Nodule with cyclical pain	Wide excision
3.	Mrs. R.	28	Episiotomy	3 yrs	Nodule with cyclical pain	Lost for follow up
4.	Mrs. M.	38	Tubectomy	1 yr	Continuous pain	Wide excision
5.	Mrs. K.	25	Tubectomy	1 yr	Painful nodule with premenstrual exacerbation of pain	Lost for follow up
6.	Mrs. S.	42	Tubectomy	6 1/2 yrs	Painful nodule with exacerbation of pain during the cycle	Lost for follow up while on hormonal treatment
7.	Mrs. M.B.	22	MTP and sterilization	3 months	Painful nodule with exacerbation of pain during the cycle	Wide excision with recurrence; was put on hormonal treatment for recurrence
8.	Mrs. A. P.	29	LSCS for CPD	4 yrs	Tender nodule on the scar	Conceived while on hormones and excision at the time of section
9.	Mrs. S.	36	LSCS with sterilization for placenta praevia	4 1/2 yrs	Tender nodule with pain during the menstrual cycle	Lost to follow up
10.	Mrs. I	45	Hysterotomy with sterilization	6 1/2 yrs	Tender nodule on the scar	Hormonal treatment followed by wide excision
11.	Mrs. A.	28	Hysterotomy with sterilization	6 1/2 yrs	Nodule on the scar with pain during cycles	Wide excision with meshplasty
12.	Mrs. R.	43	Hysterotomy with sterilization	3 yrs	Painful nodule on the scar	Wide excision

exacerbation in the premenstrual or menstrual period and 11 of them had a nodule at the incision site. None of them had bleeding from the nodule.

Even though the diagnosis of scar endometriosis is mainly clinical, use of procedures like USG, CT and needle aspiration cytology have been described<sup>4</sup>. In our series FNAC done in one case prior to surgery showed evidence of endometriosis.

The risk of scar endometriosis following episiotomy has been found to be high if the woman has had a postpartum curettage<sup>10</sup>. In the present series none had

a postpartum curettage but one had undergone manual removal of placenta.

Scar endometriosis is relatively resistant to hormonal therapy. The drugs are probably prevented from reaching the lesion because of the surrounding fibrosis<sup>8,9</sup>. Hormonal therapy was tried in four of our patients. Of them one conceived while on treatment and the lesion was excised at the time of LSCS. One opted for surgical treatment because there was no relief with hormones. The other two, of whom one was put on hormones for recurrence after surgery were lost to follow up.

Recurrence after surgical treatment is known to occur.<sup>9</sup> At the time of surgery a wide excision should be done so as to prevent recurrence. In one of our cases meshplasty was done to repair the defect in the rectus after excision of the lesion. Facial repair using mesh has been reported by Koger<sup>11</sup>.

Since scar endometriosis is thought to be due to mechanical transplantation of the endometrium certain precautions taken during surgery may help to reduce the incidence of this condition. These include irrigation of the abdominal wound, using different needles for closure of the abdominal wound and the uterine cavity, avoidance of routine cleaning of the endometrial cavity with a sponge during caesarean section and exteriorizing the uterus prior to incision at the time of hysterotomy<sup>4,12</sup>.

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