

## Endometriosis at Caesarian Section Scar

Khalifa Al-Jabri

*Abstract*

Endometriosis is a common gynecological condition which is sometimes presented to general surgeons as a lump in the abdomen. It can pose a diagnostic dilemma and should be in the differential diagnosis of lumps in the abdomen in females. Diagnosis is usually made following histological examination. This is a case report of abdominal wall endometriosis following caesarian section. This report discusses and evaluates the incidence, pathophysiology, course, diagnosis, treatment and prevention of this condition.

*From the Department of General Surgery, Buraimi Hospital, Buraimi, Sultanate of Oman.*

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*Address correspondence and reprint requests to: Dr. Khalifa Al-Jabri, Department of General Surgery, Buraimi Hospital, Buraimi, Sultanate of Oman*

*E-mail: khalifaaljabri73@hotmail.com*

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**Introduction**

**E**ndometriosis was first described by Rokitansky in 1860 and was defined as the presence and proliferation of the endometrium outside the uterine cavity, commonest site being the pelvis. The actual incidence of abdominal wall endometriosis is unknown but one series reported that only 6% of cases were unrelated to scars. In another series, the prevalence of surgically proven endometriosis in scars was 1.6%.<sup>1</sup> The most common site is at a caesarean section scar. But there are case reports of involvement of the rectus abdominis muscle in a virgin abdomen.<sup>2</sup>

Endometriosis, in patients with scars, is more common in the abdominal skin and subcutaneous tissue compared to muscle and fascia. Endometriosis involving only the rectus muscle and sheath is very rare.<sup>3</sup> The simultaneous occurrence of pelvic endometriosis with scar endometriosis has been found to be infrequent. Scar endometriosis is rare and difficult to diagnose, often confused with other surgical conditions.

**Case Report**

A 30 yrs old female patient was presented with a painful lump on the lateral aspect of a Pfannenstiel incision 10 months after a caesarean section. The lump associated with pain no h/o discharges. Abdominal examination revealed a lump about 3 x 3 cm, firm, mild and tender. Ultrasound of the abdomen was performed and revealed a bright heteroechoic mass about 3 x 3 cm at the lateral aspect of the abdominal wall scar. This was initially thought to be a stitch granuloma.

It was initially managed using conservative management techniques; however, the abdominal wall lump persisted and gradually enlarged in size. The patient was posted for a wide local excision of the abdominal wall lump. The lump was about 3 x 3

cm, firm at the external oblique aponeurosis and extending to the abdominal wall muscles, wide excision with clear margins were performed. Postoperative period was uneventful. Histopathology showed fibroadipose tissues with interspersed glands and stroma of endometriosis which confirmed diagnosis of endometriosis abdominal wall scar.

**Discussion**

Endometriosis is the presence of functioning endometrial tissue outside the uterine cavity, whereas endometrioma is a well-circumscribed mass. The various sites for extra pelvic endometriosis are bladder, kidney, bowel, omentum, lymph nodes, lungs, pleura, extremities, umbilicus, hernial sacs, and abdominal wall.<sup>4</sup> Endometriosis involving the abdominal wall is an unusual phenomenon which should be considered in the differential diagnosis of abdominal wall masses in women. The usual clinical presentation is a painful nodule in a parous woman with a history of gynecological or obstetrical surgery. The intensity of pain and size of nodule vary with menstrual cycle.

**Pathophysiology**

The proposed theories of endometrioma formation are:

- + Retrograde spread of collections of endometrial cells during menstruation
- + Blood, lymphatic or iatrogenic spread
- + Metaplasia of the pelvic peritoneal cells
- + Immune system dysfunction and autoantibody formation.<sup>5</sup>

The development of intrapelvic endometriosis may involve retrograde menstruation, maturation of extrauterine primordial cell remnants of embryogenesis and hematologic or lymphatic spread of endometrial cells. Extrapelvic endometriosis in the lung, skin, and extremities not associated with surgical violation of the

uterus is believed to be the result of hematogenous or lymphatic spread of endometrial tissue.<sup>6</sup>

Scar endometriomas are believed to be the result of direct inoculation of the abdominal fascia or subcutaneous tissue with endometrial cells during surgical intervention and subsequently stimulated by estrogen to produce endometriomas. This theory is convincingly demonstrated by experiments in which normal menstrual effluent transplanted to the abdominal wall resulted in subcutaneous endometriosis. In clinical practice, its occurrence has been well documented in incisions of any type where there has been possible contact with endometrial tissue, including episiotomy, hysterotomy, ectopic pregnancy, laparoscopy, tubal ligation, and cesarean section.<sup>7</sup> Time interval between operation and presentation has varied from 3 months to 10 years in different series.<sup>5</sup> In a study by Celik et al. a case was reported with a two year time interval.<sup>3</sup>

### Diagnosis

Scar endometriosis is rare and difficult to diagnose. It is often misdiagnosed as stitch granuloma, inguinal hernia, lipoma, abscess, cyst, incisional hernia, desmoid tumor, sarcoma, lymphoma, or primary and metastatic cancer.

A high index of suspicion is recommended when a woman is presented with a post operative abdominal lump. Good surgical and gynecological histories, as well as a thorough examination with appropriate imaging techniques (ultrasound, CT or MRI) usually lead to the correct diagnosis. CT usually shows a solid, well-circumscribed mass whereas MRI may be more helpful when the lesion is small because of its high spatial resolution, furthermore it is better than CT scan in detecting the planes between muscles and abdominal subcutaneous tissue.

### Management

The treatment of choice is always total wide excision of the lesion, which is diagnostic and therapeutic at the same time. Medical treatment with the use of progestogens, oral contraceptive pills, and danazol is not effective and gives only partial relief in symptoms and does not ablate the lesion. Moreover due to side effects such as amenorrhea, weight gain, hirsutism, and acne, compliance is unlikely. Recently, there have been reports of the use of the gonadotrophin agonist (Leuprolide acetate), but it has been found to provide only prompt improvement in symptoms with no change in the lesion size.<sup>8</sup>

### Malignant Risk

Malignant change of endometriosis in a cesarean scar is rare.<sup>9</sup> Long-standing recurrent scar endometriosis could undergo malignant

changes and clinicians should be aware. Only 21.3% of cases of malignant transformation of endometriosis occur at extragonadal pelvic sites and 4% of cases in scars after laparotomy.

### Follow Up and Prevention

Follow up of endometriosis patients is important because of the chances of recurrence, which may require re-excision. In cases of continual recurrence, possibility of malignancy should be ruled out. Hence, good technique and proper care during cesarean section may help in preventing endometriosis.

### Conclusion

Overall, general surgeons are infrequently involved in the management of cesarean section scar lesions. Thus, the lack of awareness makes the preoperative diagnosis unnoticed. When the diagnosis is made on clinical grounds, no further studies are necessary before wide surgical excision. However, imaging techniques, laparoscopy and FNAC are indicated towards better diagnostic approach. In the presence of frequent recurrences, malignancy should be suspected, which carries a poor prognosis.

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