

# Scar Endometriosis: a Case Report with Literature Review

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**Abstract-** Endometriosis is defined as the presence of functioning endometrial tissue outside the uterine cavity. Endometriosis can sometimes occur in a previous surgical scar. Scar endometriosis is rare and difficult to diagnose. It mostly follows obstetrical and gynecological surgeries. This condition is often confused with other surgical conditions. We are reporting one case of scar endometriosis involving rectus sheath following cesarean section. The patient required wide surgical excision of the lesion. The pathogenesis, diagnosis, and treatment of this rare condition are being discussed.

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**Keywords:** Abdominal wall; Endometrioma; Endometriosis; Scar endometriosis.

## Introduction

Endometriosis is defined as the presence or growth of ectopic endometrial tissue (1). Affecting an estimated 89 million women of reproductive age worldwide, endometriosis occurs in 5% to 10% of all women, often resulting in debilitating pain and infertility. However, extrapelvic endometriosis is an uncommon disorder and difficult to diagnose. The various sites for extrapelvic endometriosis are bladder, kidney, bowel, omentum, lymph nodes, lungs, pleura, extremities, umbilicus, hernia sacs, and abdominal wall (2). Abdominal wall endometrioma often develops in previous surgical scars, but there is a case report of a spontaneous occurrence too (3). The majority of the scar endometriosis have been reported after obstetrical, or gynecological procedures such as cesarean delivery, hysterotomy, hysterectomy, episiotomy, and tubal ligations but few case reports are following appendicectomy, in the laparoscopic trocar tract, amniocentesis needle tract (4-6).

Scar endometriosis patients are often referred to the general surgeons because the clinical presentation suggests a surgical cause. In a study by Blanco *et al.*, (7) the diagnosis was initially confused with an inguinal hernia, incisional hernia, and abdominal wall tumor. This entity can result in unnecessary procedures, delayed or misdiagnosis, and can cause emotional and physical distress to the patient. The present study describes a case of scar endometriosis and reviews the

literature to elucidate physical signs and symptoms that may lead to earlier diagnosis and prompt treatment.

## Case Report

Twenty-eight-year-old female patient referred to our gynecology outpatient in the month of May 2011, with chief complaints of swelling and pain in the previous caesarean scar. Obstetrical history -she was P2L2, with one previous lower segment caesarean section done three years ago, for fetal distress. Postoperative period was uneventful. Since past two years, she was having a mass of 3x3cm, in the region of the left side of the caesarean scar, with dull aching, constant pain at the site of swelling without any radiation and association with the menstrual cycle. This pain used to get relieved for some time on taking some analgesics. She was referred to our Institute three months back. General examination was within normal limits. Per abdominal examination revealed a brownish, bluish mass of 3x3cm, at the left extreme side of the Pfannenstiel caesarean scar with slight tenderness, firm consistency, and restricted mobility (Figure 1).

A probable diagnosis of scar endometriosis was made and was planned for surgical excision. All hematological investigations were within normal limits. Wide excision of the endometriotic tissue was done (Figure 2).

Post op and follow-up, stitches were removed on postoperative day eight and was discharged on

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## Scar endometriosis

the same day. The patient is in follow-up; stitch line has healed without any recurrence. Histopathological findings confirmed the diagnosis of scar endometriosis.



Figure 1. Bluish brownish swelling.

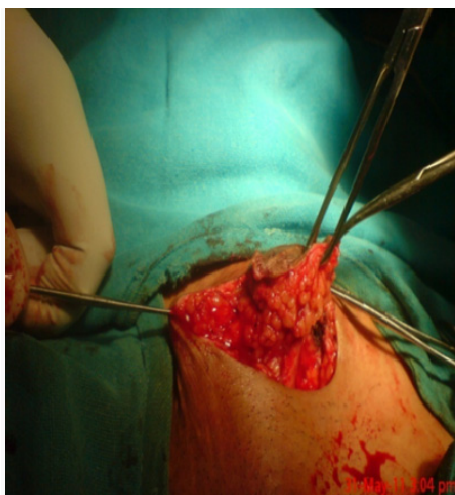


Figure 2. Wide excision of scar endometriosis

## Histopathology

Hematoxylin and eosin photomicrograph showing tissue surrounding benign endometrial glands and stroma consistent with endometriosis (Figure 3). It shows endometrial tissue with hemorrhage in upper right corner and a dilated endometrial gland in the lower right corner showing endometrial gland, epidermis. Endometriosis is defined by the occurrence of endometrial-like epithelium and stroma outside the uterine cavity. This condition is commonly seen in females of reproductive age. Grossly, endometriosis may present as small, dark red, black or bluish cysts or nodules on the surface of peritoneal and pelvic organs. Histologically,

endometriosis is characterized by the ectopic presence of endometrial-like glands, spindled endometrial stroma and hemosiderin deposition either within the macrophages or in the stroma (Figure 3). In many cases, this diagnostic triad is not present, or hemorrhage, foamy cells, and hemosiderin-laden macrophages may obscure the glands and stroma. When this occurs, the diagnosis may be suggested but histological confirmation may not be possible.

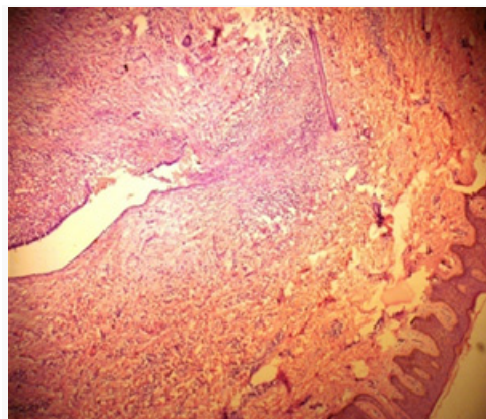


Figure 3. Histopathology

## Discussion

Endometrioma is a well-circumscribed mass of endometriosis. Abdominal wall endometrioma presents as a painful swelling resembling surgical lesions such as hernias, hematomas, granulomas, abscess, and tumors. Therefore, that is why these patients generally first refer to general surgeons. Scar endometriosis most commonly occurs after an operation on the uterus and tubes. The incidence of scar endometriosis the following hysterotomy is 1.08-2% whereas after cesarean section the incidence is 0.03-0.4%.<sup>6</sup> The reason for higher incidence after hysterotomy has been given as the early decidua has more pluripotential capabilities and can result in cellular replication producing endometrioma. The time interval between operation and presentation has varied from 3 months to 10 years in different series. The etiology of abdominal wall endometrioma is thought to be the transportation of endometrial tissue during surgical procedures and subsequently stimulated by estrogen to produce endometrioma. The simultaneous occurrence of pelvic endometriosis with scar endometriosis is infrequent (6). The current patient also did not have associated pelvic

endometriosis. Preoperative diagnosis is difficult to make and sometimes the diagnosis is made after excision only. We could make provisional preoperative diagnosis due to the discoloration and clinical experience. Various diagnostic methods have been described in the literature. Until recently the use of ultrasonogram (USG) has hardly been reported in detail and anecdotal reports have described it as nonspecific, with the ability to give a varied picture of hypoechoic mass with scattered internal echoes. Recently a large series of 12 patients where USG and color Doppler substantially contributed to the correct preoperative diagnosis (8) and authors suggest that sonography and color Doppler, when combined with clinical data, may substantially contribute to the preoperative diagnosis. FNAC has been reported to be accurate in diagnosis but in a recent report by Dwivedi *et al.*, FNAC was not diagnostic in any of the four patients who underwent this procedure (9,10). Anecdotal studies have mentioned the use of computed tomography (CT) and magnetic resonance imaging (MRI) in making a diagnosis. CT usually shows a solid, well-circumscribed mass. MRI can be more helpful when the lesion is small because of its high spatial resolution. Furthermore it performs better than CT scan in detecting the planes between muscles and abdominal subcutaneous tissue (11). Treatment of choice is wide excision of the lesion and may sometimes require mesh placement as was done in our two patients. Medical treatment with the use of progestogens, oral contraceptive pills, and danazol is not effective and gives only partial relief of symptoms. Recently there has been reporting of gonadotropin agonist use but only with the prompt improvement in symptoms with no change in the lesion size (12).

These patients need to be followed up because of the chances of recurrence, which require re-excision. In cases of continual recurrence, the possibility of malignancy should be kept in mind. To prevent the occurrence of scar endometriosis, it has been suggested that at the end of surgery especially on uterus and tubes, the abdominal wall wound should be cleaned thoroughly and irrigated vigorously with a high jet solution before closure (13).

One should have a high index of suspicion of scar

endometriosis when a woman presents with a painful swelling in the abdominal scar especially with a history of previous gynecological or obstetrical surgery. This condition can be confused with other surgical conditions. Efforts should be made to make a preoperative diagnosis with the help of imaging techniques and FNAC. Medical treatment is not helpful. Wide excision is the treatment of choice. The patient should be followed-up for recurrence.

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