

# Caesarean scar endometriosis- A case report and review of literature

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## Abstract

Endometriosis is described as the presence of functioning endometrial tissue outside the confines of the uterine cavity. Scar endometriosis is a rare disease, and is difficult to diagnose. The symptoms are nonspecific, typically involving abdominal wall pain at the incision site at the time of menstruation. It commonly follows obstetrical and gynaecological surgeries. The diagnosis is frequently made only after excision of the diseased tissue. We present here a case of abdominal wall scar endometriosis in a woman who had undergone a caesarean section eleven months ago. Surgical excision led to the diagnosis of scar endometriosis.

**Key Words:** Abdominal Wall, Painful Scar, Menstruation, Scars Endometriosis.

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endometriosis<sup>4</sup>. Endometriosis, in patients with scars, is more common in the abdominal skin and subcutaneous tissue compared to muscle and fascia. The present study describes a case of scar endometriosis, and reviews the literature to elucidate signs and symptoms that may lead to an earlier diagnosis and prompt treatment.

## CASE REPORT

A 28 year old female patient presented with a painful lump on the lateral aspect of a pfannenstiell incision 11 month after LSCS. obstetric history, she was P2L2 with one normal delivery and one LSCS for AFD. The lump was associated with pain and no history of discharge and cyclic association of pain. Abdominal examination revealed a lump of about a 4 × 3 firm, mild and tender. Ultrasound of the abdomen was performed and revealed a bright heteroechoic mass about 4 × 3 on the lateral aspect of the abdominal wall scar. This was thought to be stitch line granuloma. It was initially managed using conservative management techniques; however the abdominal lump persisted and gradually increases in size. The patient was posted for a wide local excision of the lump. The lump was about 4× 3 firm at the abdominal wall extending to abdominal muscles, wide excision was performed. postoperative period was uneventful. Histopathological showed fibroadipose tissues with interspersed glands and stroma of endometriosis which confirmed diagnosis of endometriosis abdominal wall scar

## INTRODUCTION

The pathogenesis, diagnosis and treatment of this rare condition are discussed Endometriosis, first described by Rokitansky in 1860, was defined as the presence and proliferation of endometrial tissue outside the uterine cavity, commonest site being the pelvis<sup>1</sup>. However, extra pelvic endometriosis is a fairly uncommon disorder and difficult to diagnose. The various sites for extra pelvic endometriosis are bladder, kidney, bowel, omentum, lymph nodes, lungs, pleura, extremities, umbilicus, hernial sacs, and abdominal wall<sup>2</sup>. Majority of the scar endometriosis have been reported after obstetrical or gynecological procedures such as cesarean section, hysterotomy, hysterectomy, episiotomy, and tubal ligations<sup>3</sup>. The incidence of scar endometriosis has been estimated to be only 0.03% to 0.15% of all cases of

## DISCUSSION

Scar endometriosis usually follows previous abdominal surgery, especially early hysterotomy and cesarean section. Minaglia *et al.* who analyzed 11 months of incisional endometriosis after caesarean section found the incidence of scar endometriosis to be 0.08%<sup>4</sup>. Ectopic pregnancies, salpingostomy puerperal sterilization, laparoscopy, amniocentesis, appendectomy, episiotomy, vaginal hysterectomies, and hernia repair are the other surgical factors for scar endometriosis<sup>5-7</sup>. The reported incidence after midtrimester abortion is about 1% also after cesarean sections ranging from 0.03% to 0.45%<sup>8</sup>. Frequency of scar endometriosis increases by induced number of cesarean section and laparoscopy performed in recent years<sup>9</sup>. Direct mechanical implantation seems to be the most plausible theory for explaining scar endometriosis. During caesarean section, endometrial tissue might be seeded into the wound, and under the same hormonal influences these cells proliferates<sup>10</sup>. The endometrial tissue may have certain abilities that make implantation and transplantation during pregnancy. According to this hypothesis, the strongest risk factor for development of scar endometriosis is early hysterectomy like for hysterectomies for abortion<sup>11</sup>. De Oliveira *et al.* demonstrate that heavy menstrual blood flow and alcohol consumption were positively related to scar endometriosis, and conversely high parity may be a protecting factor<sup>12</sup>. However, direct implantation of endometrial tissue cannot explain all cases. There are few cases of primary cutaneous endometriosis without prior abdominal surgery such as vulva, perineum, groin, umbilicus, and extremities<sup>13</sup>, as well as even nasolacrimal localisations<sup>14</sup>. Clinical diagnosis of scar endometriosis can be made by a careful history and physical examination. The patients present with a mass near the previous surgical scars, accompanied by increasing colicky-like pain during the menstruation<sup>15</sup>. Usually, there is a history of a gynecologic or rarely a nongynecologic abdominal operation. In these patients, correct diagnosis relies on careful examination, right questioning, and obviously taking endometriosis in consideration. Furthermore, scar endometriosis is a rare entity, the highlight of this case is the long distant duration from the previous caesarean sections. The interval between the previous caesarean sections and symptoms was 23 years. The patient encountered these worsening symptoms at the perimenopausal age. The underlying reason of this aspect may be the dysfunction of the hypothalamic-pituitary-ovarian axis which becomes a more common finding in peri- and postmenopausal women group. Anovulatory cycles produce no progesterone to stabilize cyclic withdrawal of the estrogen-prepared endometrium, bleeding episodes

become irregular, and menorrhagia are common<sup>16</sup>. Also, there are greater risks of benign and malignant neoplastic growths with the increasing age. When a proper prediagnosis cannot be achieved, scar endometriosis can be easily mixed with other surgical conditions like hematoma, neuroma, hernia, granuloma, abscess, scar tissue, neoplastic tissue, or even metastatic carcinoma<sup>17</sup>, which are a simple excuse to refer the patient to the general surgeon. Often, the diagnosis of endometriosis is not suggested until after histology has been performed. Correct preoperative diagnosis is achieved in 20% to 50% of these patients<sup>18</sup>. The worth of various methods of investigation, such as ultrasonographic examination, computed tomography, magnetic resonance imaging, Doppler sonography, or fine-needle biopsy in the diagnosis of scar endometriomas, is not clear. Imaging procedures help, rather than confirm, in obtaining a differential diagnosis. Ultrasonography is the best and most commonly used investigational procedure for abdominal masses, given its practicality and lower cost. The mass may appear hypoechoic and heterogeneous mass with messy internal echoes. On computed tomography, the endometrioma may appear as a circumscribed solid or mixed mass, enhanced by contrast, and show hemorrhages. Kinkel *et al.* revealed the sensitivity and specificity of MRI in diagnosing endometriomas to be 90%–92% and 91%–98%, respectively<sup>19</sup>. MRI is also a useful modality for presurgical mapping of deep pelvic endometriosis. Infiltration of abdominal wall and subcutaneous tissues is much better assessed by MRI<sup>20</sup>. Tomographic scans and magnetic resonance imaging are more useful in demonstrating incisional hernias and differential diagnosis<sup>21</sup>. Fine-needle aspiration cytology (FNAC) was reported in some studies for confirming the diagnosis<sup>22</sup>. However, FNAC cytology is a liable method to make the diagnosis of scars, and surgeons must be aware of some diagnosis such as inguinal hernia and reimplantation of potential malignancies during process. Our opinion of FNAC is accurate only in cases of large masses, doubtful diagnosis, and atypical clinical presentations. Histology is the hallmark of diagnosis. It is satisfied if endometrial glands, stroma, and hemosiderin pigment are seen<sup>23</sup>. Generally, diagnosis is easy with a microscopic examination of a standard hematoxylin and eosin-stained slide. Furthermore, the cytologist experience must be the important point to clarify diagnosis and to exclude malignancy<sup>24</sup>. Local wide excision, with at least a 1 cm margin, is accurate treatment choice of scar endometriosis also for recurrent lesions. Recurrence of scar endometriosis seldom happens with only a few cases reported. As expected, the larger and deeper lesions to the muscle or the fascia are more difficult to excise

completely. In large lesions, complete excision of the lesion may entail a synthetic mesh placement or tissue transfer for closure after resection<sup>25</sup>. Medical therapy with danazol, progesterone, and Gn RH produces only partial recovery, and mostly recurrence occurs after cessation of the treatment with extreme side effects [26]. The incidence of concomitant pelvic endometriosis with scar endometriosis has been reported to be from 14.3% to 26%<sup>27</sup>. Ideally, all patients must be examined for concomitant pelvic endometriosis. At this point, postoperative follow up with a gynecologist is preferable.

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