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Case Report

Caesarean section 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 uterine cavity. Scar endometriosis is a rare event which usually develops after pelvic operations involving the uterus and fallopian tubes. The symptoms are nonspecific, typically involving abdominal wall pain at the incision site at the time of menstruation. Its diagnosis can sometimes be difficult and may be confused with various other surgical conditions. We present here a case of abdominal wall scar endometriosis in a woman who has undergone caesarean delivery three years prior to her current presentation. The epidemiology, pathogenesis, clinical features, diagnosis, treatment and methods of prevention of this somewhat rare condition are discussed.

Keywords: Caesarean scar, Scar endometriosis

INTRODUCTION

Endometriosis is a common benign gynecologic disorder defined as the presence of endometrial glands and stroma outside of the normal location. First identified in the mid-nineteenth century (Von Rokitansky, 1860), endometriosis is most commonly found on the pelvic peritoneum but may also be found on the ovaries, rectovaginal septum, ureter, and rarely in the bladder, pericardium, and pleura.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. Incisional or scar endometriosis has also been described, however, with a much rarer incidence (less than 1% of affected patients).^{2,3} Scar endometriosis is difficult to diagnose and can result in unnecessary procedures, delayed or misdiagnosis leading to emotional and physical distress to the patient. The article highlights 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

A 30-year-old primipara presented with pain in lower abdomen during menstruation which also continues few days after the menses since last two years. She delivered a full term male baby by lower segment caesarean section three years back. She resumed her cycle 6 months after delivery. After few normal cycles she developed pain lower abdomen during menses which continued 2-3 days after menses. The pain gradually increased in intensity and duration. She was an otherwise healthy woman with no significant medical history. Her surgical history included an uncomplicated caesarean section three years previously.

Physical examination revealed a well-healed supra pubic transverse caesarean scar, with a nonmobile, firm, nodular and tender subcutaneous mass of size 5x5 cm

in its left lateral border. Ultrasonography revealed a hypoechoic lesion of size 42x38x27 mm seen in the subcutaneous fat layer over Left Iliac Fossa (LIF) region. Ultrasound guided aspiration cytology was done and chocolate coloured mucoid material aspirated. Cytosmear revealed loosely cohesive clusters of endometrial stromal cells with finely vacuolated cytoplasm suggestive of endometriosis. A preliminary diagnosis of scar endometriosis was made. She was treated with injection Leuprolide acetate 3.75 gm intramuscularly once in a month for 3 months. But the pain was partially subsided and the patient was planned for exploration of the abdominal wound and possible excision of the mass. Intraoperatively, an endometriotic foci of size 5x5x5 cm was found in subcutaneous tissue in the left iliac fossa region. It was excised with 0.5 cm of surrounding normal tissue. There was another small size of endometriotic tissue just below rectus sheath in that area which was excised with some of rectus sheath and some of rectus muscle. Peritoneum was opened to look for any extension of endometriosis and found normal. Abdomen closed in layers with subcutaneous drain and the specimen (Figure 1) was sent for histopathology. Histopathology report confirmed the diagnosis of scar endometriosis (Figure 2). Postoperative period was uneventful and on follow up the pain was subsided. Now our patient is on regular follow-up and doing well without any sign of recurrence.



Figure 1: Two specimens of endometriotic implants.

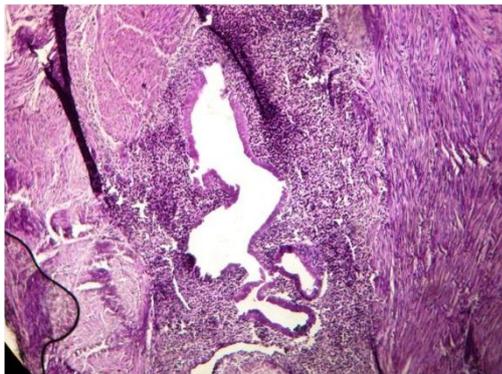


Figure 2: Histopathology showing benign endometrial glands and stroma surrounded by scar tissue with few muscle fibres consistent with endometriosis (original magnification x100).

DISCUSSION

Endometriosis is a hormonally dependent disease and as a result is chiefly found in reproductive-aged women. 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 2). In many cases, this diagnostic triad is not present, or the glands and stroma may be obscured by haemorrhage, foamy cells and hemosiderin-laden macrophages.⁴

Scar endometriosis is a rare entity reported in the gynaecological literature, and presents in women who have undergone a previous abdominal or pelvic operation.⁵ The incidence has been estimated to be only 0.03% to 0.15% of all cases of endometriosis.^{2,3} Many theories as to the cause of scar endometriosis have been postulated; however, the most generally accepted theory is the iatrogenic transplantation of endometrial implants to the wound edge during an abdominal or pelvic surgery.^{2,3,6,7} Perineal, vaginal, and vulvar scars, particularly episiotomies, colporrhaphies, and Bartholin gland excisions, are likely areas for involvement by endometriosis. There is often a history of delayed wound healing of the incisional scar infiltrated with endometriosis.⁸ These implants typically appear as either deep-lying or subcutaneous nodules infiltrating the fascia and muscle. Bleeding into the tissues at the time of menstruation can cause cyclic local pain, tenderness, and discoloration; however, the nodule may lie too deep for detection of any color change through the skin. If the nodule is superficial, cyclic bleeding or ulceration may be apparent. Abdominal scars particularly from previous caesarean section, hysterectomy, metroplasty or myomectomy also increase the risk of incisional endometriosis. Indeed, endometriosis has been reported along the needle tracts after amniocentesis or saline injection for abortion. Careful flushing and irrigation of the abdomen and of the incision during closure should minimize the chance of contamination when incision into the uterine cavity is required.⁸

The diagnosis of scar endometriosis may be challenging. Cyclical changes in the intensity of pain and size of the endometrial implants during menstruation are usually characteristic of classical endometriosis. The underlying cause of this pain is unclear, but proinflammatory cytokines and prostaglandins released by endometriotic implants may be one source.⁹ Additionally, there is also evidence to suggest that pain from endometriosis correlates with depth of invasion and that the site of pain may indicate lesion location.¹⁰ Recent data suggest that endometriosis pain may result from neuronal invasion of endometriotic implants that subsequently develop a sensory and sympathetic nerve supply, which may undergo central sensitization.¹¹ This leads to persistent hyper excitability of the neurons and

subsequent persistent pain, despite surgical excision. However, in the largest reported series¹² to date, only 20% of the patients exhibited these symptoms. Patients usually complain of tenderness to palpation and a raised, unsightly hypertrophic scar.

Management includes both surgical excision and hormonal suppression.^{13,14} Oral contraceptives, progestational, androgenic agents and gonadotropins releasing hormone agonist have been tried. It is believed that hormonal suppression is only partially effective and surgical excision of the scar is the definitive treatment.^{14,15} However, malignancy can occur in each area of ectopic endometriosis, and histological confirmation of the tentative diagnosis is recommended.⁸

Scar endometriosis is a rare and may be sometimes difficult to diagnose which can lead to both patient and physician frustration. One should maintain a high level of suspicion in any woman presenting with pain at an incisional site, most commonly following pelvic surgery. A thorough history and physical examination should always be performed, and every surgeon should consider this entity in their differential diagnosis. The entire tumor with the healthy tissue must be removed without causing the rupture in surgery. The patients must be definitively followed up postoperatively for recurrence.

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