

Incisional Endometriosis: Report of Two Cases

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Abstract: Endometriosis is the presence of functioning endometrium-like stroma and glands outside the uterine cavity. Incisional endometriosis is often misdiagnosed and confused with other surgical pathologies and delays the diagnosis. Medical treatment is ineffective and requires a wide surgical excision. We report two cases of abdominal wall endometriosis presenting 7- 14 years after lower segment caesarean section. Scar endometriosis should be considered as a differential diagnosis in a female patient presenting with an abdominal wall mass following gynaecological surgery.

Keywords: Endometriosis, Abdominal, Histopathology.

INTRODUCTION

Endometriosis is defined as growth of functioning endometrial tissue outside the endometrial cavity, which responds to hormonal stimulation. It has an estimated prevalence of 5-15% [1, 2]. The common sites of endometriosis are ovaries, ligaments of uterus, pelvic peritoneum, posterior cul-de-sac, and rectovaginal septum. It can be found in any location of body. The most common site of extrapelvic endometriosis is cutaneous endometriosis. Other sites include lungs, appendix, nose, umbilicus, peritoneum, pleura, intestinal wall, extremities etc. [1-3]. Abdominal wall endometriosis or incisional endometriosis or scar endometriosis is defined as the presence of endometrial tissue superficial to peritoneum and is associated with previous gynaecologic procedures including caesarean section (0.03-0.4% of individuals) and hysterectomy [1.08-2%] [1, 4, 6]. Incisional endometriosis is commonly misdiagnosed clinically as keloids, stitch granuloma, hernia, hematoma, lipoma, lymphadenopathy, abscess, subcutaneous cyst, or rarely metastatic tumors [1]. A painful, palpable subcutaneous mass in a caesarean section scar with symptoms of cyclic pain, cramping and bloating related to menses is usual presentation [2, 3]. We report 2 cases of endometriosis in women of age 32 and 35 years, who presented with painful abdominal wall mass.

CASE REPORT

The 2 patients presented between May and August 2014. Both had caesarean section. The 32 year old woman had undergone surgery 7 years back, and she presented with pain and mass since 6 months in the area of previous caesarean section. Detailed history revealed pain to occur few days before menses. The 35 year old woman had undergone surgery 14 years back. She also presented with pain and mass since 8 months and similar history of pain few days before menses was found. None had a history of endometriosis.

Physical examination of both revealed a firm mass with restricted mobility along the caesarean section scar. All other physical findings were normal. The 32 year old woman was clinically suspected as suture granuloma or desmoid tumor. Ultrasound revealed localized fluid collection in anterior abdominal wall below umbilicus. The 35 year old woman was clinically suspected as foreign body granuloma. Each patient underwent surgical excision. The masses measured about 7x3x3 cm in 32 year old women, and 2x1x1 cm in 35 year old women. No fascial layer was involved and all masses were easily excised. Histopathology revealed areas of endometrial stroma and gland structures in fibro-collagenous tissue in both patients (Fig 1&2). Both patients recovered without any complications.



Fig. 1: Low power showing epidermis along with areas of endometrial glands and stroma



Fig. 2: High power showing endometrial glands and stroma admixed with fibrocollagenous tissue

DISCUSSION

Mechanism of incisional endometriosis suggested is the shedding and seeding of endometrial tissue through the incision and possibly the abdominal wall. Direct implantation theory is the possible explanation given. Failure to close the parietal and visceral endometrium with sutures at caesarean section may markedly increase the post operative occurrence of endometrioma in the incision scar. Higher incidence after hysterectomy has been attributed to early deciduas having more pluripotent capabilities, which can result in cellular replication producing endometrioma [1, 2]. Endometriosis can be reduced by lifting the uterus outside the pelvis before making the incision. Also, thorough cleaning, careful flushing and irrigation of the abdominal wound with normal saline could reduce the risk of seeding [1, 5, 6]. Incisional endometriosis has also been reported from tubal ligation, ectopic pregnancy, saphingectomy, uterine suspension, inguinal herniorrhaphy, bartholin cyst excision, episiotomy, laprotomy, abdominoplasty, laproscopic trocar tract and

needle tract following diagnostic amniocentesis [4, 6]. Diagnosis involves a high degree of clinical suspicion and is difficult to be established based on pure clinical examination. Ultrasonography is done mainly to exclude hernia. Ultrasound, specifically gray scale ultrasonography with color Doppler would show an irregular shape with non-homogenous density along with alterations in peripheral vascularisation. CT and MRI scan would be helpful. CT would show a solid, well circumscribed lesion, while MRI is useful for more smaller lesions and can delineate between the muscles and subcutaneous tissue better than CT [3, 4]. Cytology would show sheets of epithelial cells, spindled stromal cells and variable number of hemosiderin laden macrophages. At least two of the three components is necessary for diagnosis of endometriosis. Background is generally sanguinous and contains inflammatory cells and histiocytes (with or without hemosiderin). Incisional biopsy should be avoided, as probability of further transportation of endometrial components along adjacent tissues is present. Histopathology will help in confirmation. Iron Prussian blue stain will confirm presence of hemosiderin deposits in tissue section. Immunohistochemistry for cytokeratin 7 and CD 10 in surrounding cytotogen stroma would be helpful [3-5, 7].

Incisional endometriosis can be found isolated, whereas coexisting incisional and pelvic endometriosis is reported in 24% of the cases. To explain coexisting other theories, put forward include retrograde menstruation and mullerian remnants metaplasia (of peritoneal mesothelial cells) [1, 4].

Few studies have considered abdominal wall endometriosis as premalignant lesions. Clear cell carcinoma, mixed clear cell and endometrioid carcinoma, mucinous and serous carcinoma are rare malignancies which are suspected to arise from endometriosis. Ectopic endometrial tissue can theoretically undergo malignant transformation and requires histological evaluation and excision. Malignancy should be strongly suspected in presence of frequent recurrences and histopathology should always be done in any case of endometriosis to rule out malignancy [1, 3-6, 8].

The mean size of the masses in incisional endometriosis in literature has been 3.1 cm. Time interval has varied between 3 month to 10 years in various studies, with a mean of 21 months, postsurgery. In our study, it was after 7 and 14 years respectively (2, 4). Treatment of choice is wide excision with safe margins. When the endometriosis involves abdominal wall muscles, en bloc resection of myofacial elements is also necessary. Resection must be complete to prevent recurrence. Post-operative medical therapy involves using aromatase inhibitors, oral contraceptives, progestins and GnRH agonists. It is still controversial

and few studies have shown lack of evidence [1-3]. Literature shows that preoperative diagnosis is mostly incorrect. In both of our cases also, it was incorrect. In view of increasing rate of caesarean section, early diagnosis and optimum management of scar endometriosis is necessary [9].

In our study, both patients were treated successfully with wide excision with wide safe margin. Local symptoms disappeared after treatment. No medical therapy was advised. Both recovered uneventfully. The appearance of endometriosis, especially after 7 and 14 years in our study, leads us to the hypothesis that mechanical migration may have played an important role rather than seeding under surgery.

CONCLUSION

Incisional endometriosis is a treatable condition requiring high index of suspicion in previous caesarean section or abdominal hysterectomy cases. It maybe more common than literature suggests. Once excised, symptoms improve drastically and due to risk of being a premalignant lesion, excision is always needed and should always be the treatment of choice. Patient should be followed up for recurrence.

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