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Case Report

Case report on an enigma of caesarean section: 'scar endometriosis'

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ABSTRACT

Endometriosis is described as a disease in which functional endometrial glands and stroma that commonly lines the uterus grows outdoor the uterus. The resulting cystic or solid tumoral masses due to endometriosis are named as endometrioma. They're normally seen within the ligaments of uterus, ovaries, pouch of Douglas and pelvic peritoneum however endometriosis has additionally been noted in nose, breast, lung, spleen, gastrointestinal tract, kidney, abdominal wall, however scar endometriomas are extremely uncommon and difficult to diagnose. This situation may be puzzled with different surgical conditions, however imaging strategies and FNAC can assist in diagnosing it better. Medical treatment is helpful in selected cases but wide excision is the treatment of choice.

Keywords: Endometriosis, Caesarean section, Granuloma, Scar, Lump

INTRODUCTION

Endometriosis is defined by occurrence of endometrial-like epithelium and stroma outside the uterine cavity. It is commonly seen in females of reproductive age group. Endometriosis was first described by Rokitansky. It broadly speaking takes place through iatrogenic seeding inside the wake of obstetric and gynaecologic surgeries. Patients generally approach to general surgery clinics for this ailment.¹ The commonly affected sites for extra pelvic endometriosis are bladder, kidney, bowel, omentum, lymph nodes, lungs, pleura, extremities, umbilicus, hernial sacs, and abdominal wall.^{2,3} Even though endometriosis is frequently observed inside the pelvic space, it can also show localization outside pelvic region, such as heart, lungs, liver, kidneys, central nervous system, and the abdominal wall. Despite the fact that the endometrium is determined in regions outside its normal location, endometriotic foci still comprises of normal endometrial tissue. For this reason, during menstrual periods, thickening, destruction, and menstrual bleeding also arise almost continually in those regions, just as within the

endometrium. But instead of draining the blood outside as in normal uterine menstrual flow, the endometrial tissue from the scar endometriosis collects the blood. Overtime this collected blood increases in size and becomes symptomatic.

Its precise occurrence is unknown because it can be diagnosed only after surgery either open or laparoscopy, but it is estimated to be present in 3-10% of women of the reproductive, and 25-35% of infertile women. In women who had undergone a pelvic operation, scar endometriosis isn't always rare and its incidence is 1% after abdominal hysterectomy and 0.03-0.04% after a caesarean section.⁴⁻⁷

Although several theories were suggested to explains its origin, the concept of direct implantation is the most recognized.⁸ Ectopic endometriosis foci do not usually display the tendency to become malignant.⁹ Various broad series in the literature have addressed why the incidence of the disease in question is rare.¹⁰

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 both in the macrophages or in the stroma. In lots of instances, this diagnostic triad isn't present, or haemorrhage, foamy cells and hemosiderin-filled macrophages may obscure the glands and stroma. When this happens, the diagnosis may be suggested but histological confirmation may not be feasible.

CASE REPORT

31 years old, P2L2, visited to our gynaecology OPD with chief complains of swelling and pain in previous caesarean scar site. History of second lower segment caesarean section done four and a half years back for Meconium-stained liquor with fetal distress. Postoperative period was uneventful. She was apparently well till last 1 year, when she started developing a lump of 4X3cm, at the extreme right side of previous caesarean scar (Figure 1). The pain was dull aching in nature, increasing in intensity with menses and non-radiating. This pain used to get relieved temporarily on taking analgesics.



Figure 1: Gross appearance of scar endometriosis.



Figure 2: Wide excision of scar endometriosis.

General examination was within normal limits. Per abdominal examination showed a brownish bluish mass of 4x3 cm, at extreme right side of Pfannenstiel caesarean scar with slight tenderness, firm in consistency with restricted mobility. A clinical diagnosis of scar endometriosis was made. FNAC confirmed the diagnosis

and wide surgical excision was planned. All blood investigations were within normal limits. Wide excision of the endometriotic tissue was done and sent for histopathological examination (Figure 2). Stitches were removed on postoperative day 10. Histopathological report confirmed the diagnosis of scar endometriosis. No recurrence was noted on follow-up.

DISCUSSION

Endometrioma is defined as endometriosis that forms a mass with a clean boundary. Despite the fact that scar endometriosis may be visible after caesarean surgical procedures, it may also develop after hysterectomy, hysterotomy, tubal surgeries, appendectomy, trocar-site, amniocentesis, and episiotomy.¹¹⁻¹³ There have been many theories put forward in terms of its etiopathogenesis. Scar endometriosis is popular to be formed through the iatrogenic dispersion of endometrial cells at some point of surgical operation.¹⁴⁻¹⁶ It can be visible within the lungs, liver, kidneys, ureters, central nervous system, abdominal scar tissues, and in the extremities, other than pelvic organs.^{4,6} Even though scar endometriosis might also occur months and even years after gynaecologic surgical procedure, the average duration of occurrence is 30 months.¹³

The incidence following caesarean section the incidence is 0.4-0.04%.^{17,18}

The usual clinical presentation is a painful nodule with a history of gynaecological or obstetrical surgery. The intensity of pain and size of nodule varies with menstrual cycle.

The frequency of scar endometriosis has increased in the recent past because of the increasing numbers of caesarean sections and laparoscopies.¹⁹ Direct mechanical implantation seems to be the most acceptable theory for explaining scar endometriosis. During caesarean section, endometrial tissue is probably seeded into the wound and under the identical hormonal influence, these cells proliferate and form the scar endometrioma.²⁰ Metaplasia of peritoneal mesothelial cells which remain in the incision during the preliminary operation has additionally been reported.²¹ The theories of lymphatic or vascular dissemination, in addition to retrograde menstruation aren't widely accepted.²² Finally, the recent hypothesis that the presence of endometriosis is associated with immunogenetic defects may give an explanation for its development via inadequate response of the peritoneal defense mechanism to the retrograde flow or implantation of endometrial tissue.^{23,24}

The classical presenting symptoms of cyclical pain and increase in the size of mass may be due to hormonal affects that cause changes in size, cutaneous bleeding, and bruising.²⁵

Scar endometriosis because of its varied presentation is commonly misinterpreted for other surgical conditions which includes hernia, hematoma, neuroma, suture granuloma, lipoma, abscess, sebaceous cyst, and neoplastic tissue or even metastatic carcinoma, and are reviewed by general surgeon first.²⁶ Often the confirmation of diagnosis of endometriosis is not advised until after histology has been done. Correct preoperative diagnosis is attained in only 20-50% of those patients.²⁷

Imaging techniques (USG and MRI) help, rather than confirm, in acquiring a differential diagnosis. USG is the best and first line diagnostic procedure used for abdominal masses, given its easy availability and low price. It may appear as a hypoechoic and heterogeneous mass with lot of internal echoes. The diagnosis-establishing value of fine needle aspiration biopsy is low. Nevertheless, it is still recommended in scar endometriosis due to its convenience. For a final diagnosis, an accurate pathologic analysis is needed. The pathologic detection of glandular epithelial cells, spindle or oval stromal cells, and hemosiderin-laden macrophages lets in for organising a prognosis.^{28,29}

Medical management with dienogest, danazol, progesterone, GnRh agonists may or may not be useful but recurrence occurs after cessation of the treatment.³⁰ The treatment of choice remains the wide surgical excision to healthy margins of at least 1cm, providing both diagnostic and therapeutic intervention. The presence of residual endometrial tissue is related to recurrences. As ectopic endometrial tissue can theoretically go through malignant transformation, histologic evaluation is important. Malignant transformation of endometriosis in a cesarean scar is rare.³¹ Long-standing recurrent scar endometriosis pose a high risk for malignant changes and clinician need to be alert for this.

CONCLUSION

The incidence of scar endometriosis is on rise because of the increasing numbers of caesarean sections so one should have a high index of suspicion of scar endometriosis, whenever a woman presents with a periodic painful mass in the abdominal scar, especially with a history of previous gynaecological or obstetric surgery. This condition mimics other surgical conditions, however efforts should be made to make a preoperative diagnosis with the help of imaging techniques and FNAC. Medical treatment is helpful in selected cases but wide excision is the treatment of choice. The patients should be followed up for recurrence.

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