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Case Report

Scar endometriosis: a rare complication of cesarean section

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ABSTRACT

Scar endometriosis, also known as incisional endometriosis, is a rare condition characterized by the presence of functional endometrial tissue in surgical scars, most commonly after cesarean sections or gynecological procedures. We report a case of 34-year-old woman (P2L2) presented with a pain and swelling in the previous LSCS abdominal scar since 1year. Imaging revealed a hypoechoic lesion suggestive of endometriosis. Surgical excision was performed, and histopathology confirmed the diagnosis. Postoperative follow-up indicated complete symptom resolution and no recurrence on follow up. Wide local surgical excision is the definitive treatment for permanent cure.

Keywords: Scar endometriosis, Incisional endometriosis, Cesarean section, Cyclical pain, Surgical excision

INTRODUCTION

Endometriosis is the presence of functional endometrial tissue outside the uterine cavity, commonly affecting the pelvis and ovaries and peritoneum.[1] Scar endometriosis is a rare extra-pelvic manifestation that occurs in surgical scars, particularly after cesarean delivery or other gynecological surgeries[2]. The reported prevalence of scar endometriosis is 0.03% to 0.04%, with post-cesarean cases forming a small subset[3]. Due to its rarity and varied clinical presentation, diagnosis is often delayed. This case underscores the importance of considering scar endometriosis in women presenting with cyclical scar pain and swelling.

CASE REPORT

A 34-year-old woman (P2L2) presented with a 1-year history of dull, cyclical pain and swelling over her cesarean section scar. The symptoms intensified during menstruation. Her cesarean section had been performed 7 years prior. On examination, a 2×2 cm tender, nodular, non-mobile swelling was noted 2 cm lateral to the right end of the Pfannenstiel incision. The overlying skin showed mild erythema and was tender on palpation.

The clinical suspicion of scar endometriosis was followed by USG revealed mixed hypoechoeic lesion of size (21.9×22.4×25.2) mm with internal vascularity anterior to cesarean scar suggestive of endometriosis (Figure 1).

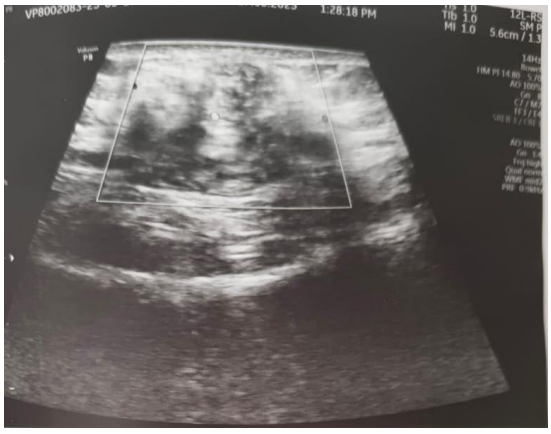

Figure 1: USG showing mixed hypoechoeic lesion anterior to cesarean scar.

There was no ovarian and uterine pathology on ultra sound. MRI showed evidence of mass lesion along the cesarean section in anterior abdominal wall measuring approximately 23.1×30.5×23.9 mm (AP×TD×HT) appearing slightly hyperintense to muscle on T1 (Figure 2), CA125 was 9.11 U/ml.

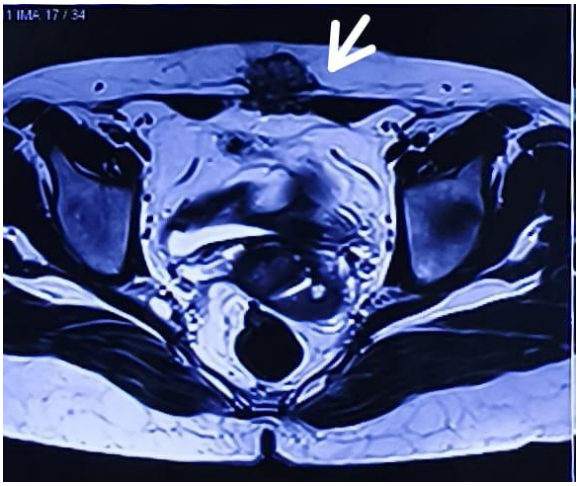

Figure 2: MRI showing lesion in anterior abdominal wall (arrow).

Surgical excision was undertaken under general anaesthesia. A bluish nodular lesion (~2×2 cm) involving the subcutaneous plane and outer rectus sheath was removed with a 0.5 cm margin using monopolar cautery. The specimen was sent for histopathological examination.

Outcome

Patient came for follow up after 1.5 months. She had complete resolution of symptoms including normal menses with no pain at scar site. Stitch line was healthy. No tenderness to palpation noted. Microscopic evaluation revealed fibromuscular tissue with several endometrial glands, stroma, and areas of hemorrhage, confirming the diagnosis of scar endometriosis (Figure 3).

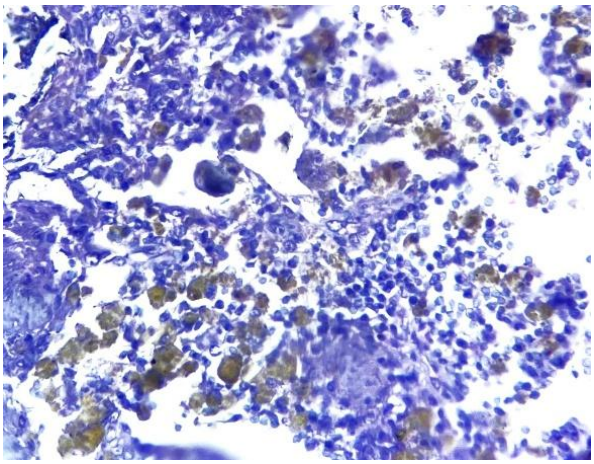

Figure 3: Histopathology report showing endometrial glands and areas of haemorrhage.

DISCUSSION

Scar endometriosis is an uncommon manifestation of extra pelvic endometriosis that usually develops in surgical scars following obstetric or gynecological procedures, especially cesarean section. Mean patient age of presentation is 31.4 years.[5] The average latency period between surgery and symptom onset ranges from 3 to 4 years, consistent with our case.[5,6] The pathogenesis involves iatrogenic implantation of endometrial cells in wound during uterine surgery, which later proliferates under hormonal influence. Tissue thickens, breaksdown and bleeds every month leading to fibrosis and adhesions to surrounding tissue taking formation of a nodule. This causes cyclical swelling and localised pain into that nodule.

The differential list includes abcess, hematoma, sebaceous cyst, stitch granuloma, or incisional hernia resulting in delay of diagnosis.[4] Rarely, abdominal wall tumours such as desmoids, lipomas or sarcomas can also present in a similar manner. However, a cyclical nature to the pain in relation to a previous scar was strongly suggestive of scar endometriosis.

Imaging with ultrasound and MRI can assist in diagnosis, with MRI offering higher sensitivity. However, definitive diagnosis requires histopathological confirmation. While fine-needle aspiration cytology (FNAC) can be helpful, there is a theoretical risk of seeding and is not routinely preferred.

Medical management of cesarean scar endometriosis, includes dienogest or DMPA, provides temporary symptomatic relief but does not reduce the size of the lesion. Use of GnRH agonist (Leuprolide) & GnRH antagonists (Elagolix) may also offer temporary benefits as it does not affect the fibrosis and the size of the lesion returns to its original state once the effect wears off. Therefore, surgical excision is the definitive treatment of choice.

Post resection recurrence is reported in 4.3% of cases.[5] Other complications of surgery include infection, bleeding, damage to surrounding organs like the bladder or bowel, nerve injury, formation of hernias.

CONCLUSION

Scar endometriosis should be suspected in women presenting with cyclical pain related to menses and swelling at surgical scars. Wide local surgical excision is the definitive treatment for permanent cure.

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