



CESAREAN SCAR ENDOMETRIOSIS: A CASE SERIES

Obstetrics & Gynecology

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ABSTRACT

Endometriosis is defined as growth and presence of ectopic functional endometrial tissue outside the uterus. The lesions are typically located in the pelvis but can occur at multiple sites including bowel, diaphragm, abdominal scars, pleural cavity. Scar endometriosis has been described after obstetrical or gynecological surgeries. The incidence of cesarean scar endometriosis is on the rise due to increase in number of cesarean sections. Scar endometriosis can be in the skin, subcutaneous tissue, rectus sheath or muscle or in the uterine myometrium. The endometriotic lesions are hormone dependent and tend to bleed with each menstrual cycle, becoming congested and larger in size with patients feeling cyclical pain and discomfort. Treatment is mostly surgical.

KEYWORDS

endometriosis, scar, cesarean, swelling, incision

INTRODUCTION

Endometriosis is defined as the presence of endometrial tissue (glands and stroma) outside the uterus. Frequent sites of implantation - pelvic viscera and peritoneum. It is estimated to occur in 10% of reproductive age women and is associated with pain and infertility. Extra pelvic endometriosis is a rare entity, wherein the incidence of scar endometriosis is as low as 0.03 to 0.15 %. Recently the occurrence of cesarean scar endometriosis has been increasing with the increase in Cesarean section rates.

MATERIALS AND METHODS

Type Of Study: Retrospective study

Place Of Study: Sri Ramachandra Institute of Higher Education and Research

Period Of Study – 2020 to 2022

Number Of Cases – 4 (cesarean scar endometriosis)

Patients' demographic features, presenting symptoms, clinical and operative findings were evaluated.

PATHOPHYSIOLOGY

Transplantation theory – It is the most accepted theory, originally proposed by Sampson in 1920- based on an assumption that the disease is caused by seeding or implantation of endometrial cells by trans tubal regurgitation during menstruation. Endometriosis occurs most often in the pelvis. Rarely implants of endometriosis can occur outside of pelvis and these are termed as extra pelvic endometriosis. The term cesarean scar endometriosis is an unusual manifestation of extra pelvic endometriosis.

One of the most accepted theories about cesarean scar endometriosis is the mechanical implantation. Endometrial cells are inoculated into the surgical area and can progress to endometriosis in optimal conditions.

S.No	Age	Previous Surgery	Chief Complaints	Clinical Examination	USG	MRI	Intra Op Findings	Histopathology
1.	33	Previous 2 LSCS	Pain in cesarean scar site and dysmenorrhea for 1 year	3x4 cm mass palpable at scar site on left side	Multiloculated cyst with internal echoes seen in the subcutaneous region towards left of midline- 3.9 x 1.6 cm suggestive of scar endometriosis	well defined lobulated T1/T2 hyperintense lesion, 4.3 x 2.7 x 4.1 cm with internal septations 2 mm in intramuscular plane of left rectus abdominis (figure 1)	4x 3 cm mass felt per abdomen and seen on rectus muscle. 20 ml of fluid drained out from endometriotic cyst in rectus muscle. Upper and lower border of cyst identified, removed with part of rectus muscle. Rectus sheath intact. (figure 2)	Features consistent with scar endometriosis with no evidence of granuloma or malignancy
2.	28	Previous 1 LSCS	complaints of right sided abdominal pain on and off for 2 and half years.	Tenderness over scar	Two subcutaneous nodules with predominantly hyper echotexture noted along the cesarean section scar line on the right midline of abdomen (suggestive of scar endometriosis)	Lesion measuring 2.2 x 1.6 cm seen in the deep subcutaneous plane adherent to anterior layer of rectus sheath. Another 2.5 x 1.6 cm seen in the midline within rectus sheath involving both anterior and posterior layers along the lower segment cesarean scar. – suggestive of scar endometriosis	Endometrial tissue of size 5 x 6 cm noted on right side of scar in subcutaneous zone above rectus sheath. Another endometrioma of size 3 x 4 cm at the rectus sheath noted. Wide excision of the same lesions done, and specimen sent for histopathology	Fragments of fibromuscular and fibroadipose tissue showing benign endometrial glands lined by proliferative columnar epithelium and endometrial stroma
3.	33	Previous 2 LSCS	Swelling in suprapubic region, associated with pain during menstruation	3x3 cm swelling palpable on the center of Pfannenstiel scar. Tenderness+	Irregular marginated hypoechoic lesion of size 23x 39 mm arising from the scar tissue- suggestive of scar endometriosis	In-homogenously hyperintense T2 weighted image showing 2.2 x 3.8 cm suggestive of abdominal wall endometriosis in rectus abdominis	3x3 cm endometriotic tissue found involving the rectus muscle, same excised and sent for HPE	Variably dilated endometrial glands surrounded by spindle cell stroma and hemosiderin macrophages

4	30	Previous 2 LSCS	Pain in right lower abdomen associated with dysmenorrhea	1.5x 1.5 cm tender mass present above Pfannenstiel scar on right side	Tiny hypoechogenic lesion of size 1.6 x 1.9 cm in the subcutaneous plane along right iliac fossa suggestive of scar endometriosis	Not done	2 x 3 cm mass of hardened? Endometriotic tissue? Fibrous tissue above the rectus sheath excised and sent for HPE	Features consistent with scar endometriosis
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RESULTS

The results are limited due to small number of patients. Cyclic pain and palpable mass at the scar site were the common presenting complaints. Mean age of presentation – 31 years. Preoperatively diagnosis for all 4 patients was done by ultrasound. In all patients treatment was surgical excision of endometriotic lesion. Postoperatively endometriosis was confirmed by histology in all patients (endometrial glands and stroma). During the follow-up period (mean – 6 months) patients were not receiving medical therapy for endometriosis. The recurrence of endometriosis was not observed during this follow-up period.

DISCUSSION

Endometriosis in cesarean scar is a rarely observed disease. Factors contributing to Cesarean scar endometriosis possibly includes easy separation and transport of endometrial cells by amniotic fluid. Higher incidence is reported after preterm deliveries as early decidua seems to have more pluripotent capabilities and can result in enhanced cellular replication producing endometriosis. The common presentation of cesarean scar endometriosis includes pain and palpable mass. Menstruation usually aggravates the disease. The mass under the cesarean scar and symptoms in a cyclic manner fairly facilitate the diagnosis of the disease. Scar endometriosis usually develops in superficial layers and nodules are usually found by palpation. The clinical evaluation can be confirmed by pelvic ultrasonography. Ultrasonography is the most accessible, reliable and cost-effective procedure. Additional diagnostic procedures such as MRI and computed tomography can be performed for detecting the relationship between mass and other tissues. The treatment options for scar endometriosis include medical therapy and surgical therapy. Medical treatment involving hormone suppression has been suggested but it only gives partial relief and recurrence after cessation of medication is constant. Surgical excision with at least 1 cm margin which is both diagnostic and curative remains the most effective treatment for scar endometriosis.

Role Of Prevention

1. Isolation of abdominal wall incision site and lavage of the pelvic cavity with saline before closure of the wall.
2. Closure of peritoneal layers may significantly decrease the incidence of scar endometriosis.
3. Replacing needles when suturing superficial abdominal layers to prevent accidental inoculation of endometrial cells.

CONCLUSION

Extra pelvic endometriosis, albeit well documented in literature, remains an enigma. Cesarean scar endometriosis should be considered in all women of reproductive age with a history of obstetric surgery and presenting with cyclic pain and swelling at incision site. Early diagnosis is crucial as the condition is detrimental to patients' quality of life and wellbeing. Surgical resection is considered as the definitive treatment option for scar endometriosis.

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