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Scar endometriosis: An unusual cause of abdominal pain

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Abstract

Background: Implantation of an endometriotic lesion within a pelvic or abdominal wall scar is an uncommon but well-described condition that may be the underlying cause of acute or chronic recurrent abdominal or pelvic pain, especially after cesarean section. Patients with scar endometriosis may be asymptomatic or present with cyclical pain corresponding to the menstrual cycle.

Materials and Methods: A 2 year retrospective study was performed for all cases with a pre-diagnosis of scar endometriosis, and the diagnosis was confirmed on pathological specimen.

Results: The mean age of the patients was 33.5 years (range 25-37 years). All patients had a history of cesarean section. The lesion was present at cesarean section site in all patients. The median interval from symptoms to curative surgical procedure was 13 months (10-28 months). The average size of lesion was 2.6 cm (range 2-4 cm). The complaints began 12 months after their cesarean section in 6 (75%) patients. Mostly abdominal ultrasonography was used for diagnostic purposes. The lesions were totally excised and the SE diagnosis was made through a histopathological examination in all patients. No postoperative complications or recurrences were seen in any of the patients.

Conclusion: Suspicion of SE is essential in women of reproductive age who have a history of cesarean section and complaints of an anterior abdominal wall mass and a pain at the scar site that is associated with their menstrual cycle. An accurate and early diagnosis can be established in such patients through a careful history and a good physical examination and possible morbidities can be prevented with an appropriate surgical intervention.

Keywords: Scar endometriosis, caesarian, decidual, menstrual

Introduction

Endometriosis is reported in 15%–44% of women of child bearing age who undergo laparoscopy or laparotomy [1]. Scar endometriosis (SE) develops in the skin, subcutaneous tissues, and muscles of abdominal and pelvic wall after various obstetric or gynaecologic surgeries and particularly after a cesarean section [2, 3].

There are various theories of the scar endometriosis. One of them is the direct implantation of the endometrial tissue in scars during the operation [4]. Under proper hormonal stimulus these cells may proliferate (Cellular transport theory) or the neighbourhood tissue may undergo metaplasia, which leads to scar endometriosis (Coelomic metaplasia theory). By lymphatic or vascular pathways the endometrial tissue may reach the surgical scar and then generate to scar endometriosis.

Patients with scar endometriosis can present with a variety of complaints including cyclic abdominal pain, a palpable mass, and/or pelvic pain symptoms consistent with endometriosis [5]. Often women are referred to general surgery for excision, with the chief complaint of an abdominal wall mass or pain. For this reason, detailed history and clinical examination including history of a previous cesarean section should be revealed, and care should be taken to find out if their pain is of cyclic nature. Although abdominal ultrasonography (USG), computed tomography (CT), and magnetic resonance imaging (MRI), are helpful in making a diagnosis [6], but most of the times results are non specific. The curative treatment is the excision of the mass, which also allows making a definitive diagnosis of SE through histopathological examination.

Materials and Methods

It was a retrospective study done on all cases reported as scar endometriosis previously from Jan 2016 to Dec 2018. The demographic characteristics, anamneses, the number of caesarean sections undergone, complaints of the patients, the onset of these complaints, the localization and size of the mass, the diagnostic methods used, surgical treatment procedures used, the duration of hospital stays, and patient outcomes were all recorded. Statistical analysis was performed using SPSS version 20. Continuous data are reported as mean and SD when normally distributed, and as median and inter quartile range (IQR) when not normally distributed. The comparisons of normally distributed, continuous data were made with a Student t test and an analysis of variance. The categorical data were analyzed with Fisher exact tests and are presented as counts and percentages.

Results

The median age of the patients was 33.5 years (Range 25-37 years). Five patients presented with complaints of cyclic pain and swelling while three patients had swelling only at the local site. The lesion was present at caesarean section site in all patients. The median interval from symptoms to curative surgical procedure was 13 months (10-28 months). The average size of lesion was 2.6 cm (Range 2-4 cm). Preoperative diagnosis was made on FNAC (Fine needle aspiration cytology) in one patient. All patients underwent complete surgical resection. The diagnosis was made on histological examination in all patients. All patients had regular follow-up ranging from 9 months to 12 years and there were no recurrences in any patient. Details of the patients are given in Table 1.

Table 1: Detailed information on patients with Scar endometriosis.

Patient	Age Yrs.)	Presenting Symptoms	No. of C/S	Time of symptom. (Mths).	Location of lesion	Dxtic tool	Rx
1	34	Swelling, cyclic pain	2	28	Right side of scar	USG,MRI	Excision
2	35	Mass	3	12	Left side of scar	USG,MRI	Excision
3	28	Mass, cyclic pain	2	10	Left side of scar	USG ,CT	Excision
4	36	Mass	3	12	Midline of scar	USG	Excision
5	25	Mass ,cyclic pain	1	20	Right side of scar	USG	Excision
6	37	Mass ,cyclic pain	2	14	Right side of scar	-	Excision
7	33	Swelling	3	11	Left side of scar	USG,MRI	Excision
8	28	Swelling, cyclic pain	1	24	Right side of scar	USG,MRI	Excision

Discussion

The development of a Cesarean scar endometriosis is infrequent [7, 8]. The exact incidence is unknown, although one report suggests a rate of 0.03 percent following term or near-term Cesarean sections [9]. The major theories that have been postulated for the development of endometriosis in surgical scars are transportation and metaplastic theory. The transportation theory proposes the direct seeding of uterine endometrial tissue into a scar. According to metaplastic theory, non-endometrial cells have the capability of changing into endometrial tissue [10, 11]. It has been suggested that during Cesarean section, wiping the endometrium with a moist or dry sponge after delivery of the placenta and before closure of the uterine incision could deliver endometrial tissue to the abdominal wound [8]. Because early pregnancy endometrial tissue might have a greater potential for viability when transported, [8, 10] caution has been urged when sponging the uterine cavity at preterm Cesarean sections [8]. Careful surgical technique to avoid spillage of decidual tissue into the wound edges might reduce the rate of scar endometriosis [9].

Cyclic pain is considered as one of the symptoms of endometriosis which was seen in five out of eight patients in our study. Interval between the surgical procedure and presentation of scar endometriosis vary from months to years (3 months–10 years) in various series [9, 12, 13]. In our study, the median interval was 13 months.

Many reports have documented the accuracy of FNAC from the mass as an important confirmatory investigation [14, 15]. In our series, we could diagnose only one patient accurately with this condition by FNAC. Theoretically, this procedure has the potential to seed the needle tract with cells and can cause recurrence, especially within concomitant intra-pelvic endometriosis, although this has not been reported [14, 15].

In patients whose SE diagnosis is doubtful, other pathologies including lipoma, incisional hernia, suture granuloma, and abdominal wall tumors should be considered for differential diagnosis [16, 17, 18]. In such a case, additional radiological procedures should be employed for the diagnosis. CT and MRI were very helpful in revealing the localization and size of the mass palpated at the anterior abdominal wall, its relationship with the surrounding tissues, and whether there were any other pathologies in the abdomen [16, 19]. However, it is not possible to make a final diagnosis using these radiological examinations alone. The definitive diagnosis of SE is made after a histopathological examination of the surgically removed tissue has clearly shown the presence of endometrial smooth muscle cells, stroma, glands, and hemosiderin-laden macrophages in the tissue [Fig 1 and 2].

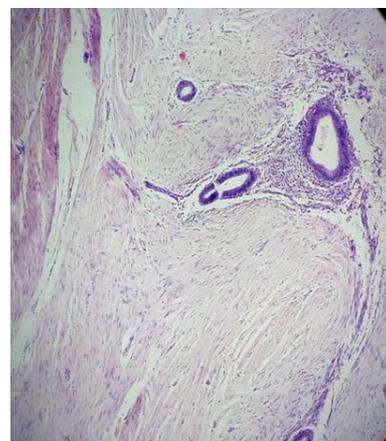


Fig 1: In this microscopic view of an excised abdominal wall endometria, endometrial glands and stroma are inappropriately adjacent to skeletal muscle (Hematoxylin-Eosin, 40X)

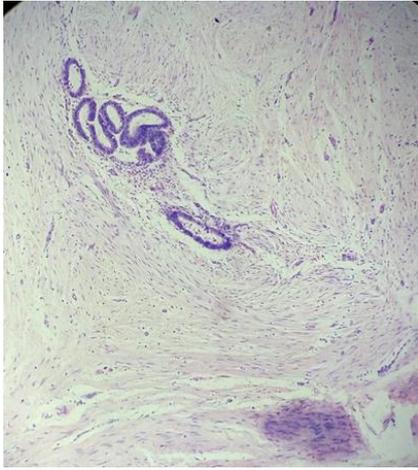


Fig 2: HPE showing an endometriosis locus in the resected mass (Hematoxylin-Eosin, 40X)

In conclusion, scar endometriosis is a rare condition and should be suspected when a lady in the reproductive age presents with pain and swelling at scar site after obstetric surgery. USG and FNAC are useful diagnostic tools. Histopathology of the excised specimen gives the confirmatory diagnosis.

References

1. Blanco RG, Parithivel VS, Shah AK, Gumbs MA, Schein M, Gerst PH. Abdominal wall endometriomas. *Am J Surg.* 2003; 185(6):596-598.
2. Ail DA, Joshi AR, Manzoor I, Patil S, Kulkarni M. Fine-needle aspiration cytology of abdominal wall endometriosis: a meaningful adjunct to diagnosis, *Oman Medical Journal.* 2018; 33(1):72-75.
3. Bozkurt M, Cil AS, Bozkurt DK. Intramuscular abdominal wall endometriosis treated by ultrasound-guided ethanol injection, *Clinical Medicine & Research.* 2014; 12(3-4):160-165.
4. Steck WD, Helwig EB. Cutaneous endometriosis. *Clin Obstet Gynecol.* 1966; 9:373-383.
5. Patterson G, Winburn G. Abdominal wall endometriomas: report of eight cases. *Am Surg.* 1999; 65:35-9.
6. Savelli L, Manuzzi L, Di Donato N, *et al.*, Endometriosis of the abdominal wall: ultrasonographic and Doppler characteristics, *Ultrasound in Obstetrics & Gynecology.* 2012; 39(3):336-340.
7. Rovito P, Gittleman M. Two cases of endometrioma in cesarean scars. *Surgery.* 1986; 100:118-20.
8. Wolf GC, Singh KB. Cesarean scar endometriosis: a review. *Obstet Gynecol. Surv.* 1989; 44:89-95.
9. Chatterjee SK. Scar endometriosis: a clinic pathologic study of 17 cases. *Obstet Gynecol.* 1980; 56:81-84.
10. Steck WD, Helwig EB. Cutaneous endometriosis. *JAMA.* 1965; 191(3):167-70.
11. Ferrari BT, Shollenbarger DR. Abdominal wall endometriosis following hypertonic saline abortion. *JAMA.* 1977; 238:56-7.
12. Patterson GK, Winburn GB. Abdominal wall endometriomas: report of eight cases *Am Surg.* 1999; 65:36-39.
13. Horton JD, Dezee KJ, Ahnfeldt EP, Wagner M. Abdominal wall endometriosis: A surgeon's perspective and review of 445 cases *Am J Surg.* 2008; 196:207-212.
14. Gupta RK, Fine-needle aspiration cytodiagnosis of endometriosis in cesarean section scar and rectus sheath

- mass lesions – a study of seven cases *Diagn Cytopathol.* 2008; 36:224-226.
15. Gupta RK, Green C, Wood KP. Fine needle aspiration cytodiagnosis of endometriosis in an abdominal scar after caesarean section *Cytopathology.* 2000; 11:67-68.
16. Yildirim D, Tatar C, Doğan O, *et al.*, Post-caesarean scar endometriosis, *Journal of Turkish Society of Obstetric and Gynecology.* 2018; 15:33-38.
17. Petrosellini C, Abdalla S, Oke T. The many guises of endometriosis: Giant abdominal wall endometriosis masquerading as an incisional hernia, *International Journal of Fertility & Sterility.* 2018; 11(4):321-325.
18. Chauhan V, Pujani M, Singh K, Chawla R, Ahuja R. Scar endometriosis with rudimentary horn: an unusual and elucidative report of a case diagnosed on histopathology and immunohistochemistry, *Journal of Mid-life Health.* 2017; 8(4):196-199.
19. Alnafisah F, Dawa SK, Alalfy S. Skin endometriosis at the caesarean section scar: a case report and review of the literature, *Cureus.* 2018; 10(1):e2063.