Abdominal wall endometriosis following cesarean section: report of five cases

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Summary

Background: Endometriosis is the presence of endometrial tissue outside the uterus. Abdominal wall endometriosis is a very rare location of this pathology. We aimed to report a series of five cases of abdominal wall endometriosis following cesarean section at our clinic. *Case report:* All of our cases had had previous cesareans section and complained of pain at the pfannensteil incision scar. The cases presented palpable and tender masses near the scar. After excision of the masses histopathology reported the masses as endometriosis. *Conclusion:* Abdominal wall endometriosis is a rare condition. Clinicians should be aware of this pathology especially in women presenting with a painful mass near the scar of a previous cesarean section.

Key words: Cesarean; Abdominal wall; Endometriosis; Excision.

Introduction

Endometriosis is a condition that especially affects reproductive-age women with an incidence of 15% [1]. Simply it may be described as growth of the endometrial gland and stroma outside the uterus [2]. The most common sites of endometriosis are the ovaries and then the uterine ligaments, rectovaginal septum and pelvic peritoneum. One of the rarest sites of extra pelvic endometriosis is abdominal wall endometriosis (AWE) [3].

The differential diagnosis of this patholgy has a wide spectrum such as abscess, lipoma, hematoma, sebaceous cyst, suture granuloma, inguinal hernia, incisional hernia, desmoid tumor, sarcoma, lymphoma, or primary and metastatic cancer [4]. AWE that follows previous cesarean section has an incidence of 0.03%-0.4% [5].

In this study, we assessed the clinical characteristics of our cases of AWE following cesarean section.

Case Report

The cases evaluated in the present study were treated in Ergani State Hospital which is a government hospital in south-eastern Turkey, a rural area where the residents are mostly of lower socioeconomic and educational status.

The demographic and clinical characteristics of the cases are depicted in Table 1. All cases were reproductive-age women with no history of alcohol, smoke or drug use who had had previous cesarean section. The initial complaint of the cases was a painful mass near the pfannensteil incision scar.

On physical examination we detected semi solid, tender and painful masses. All the cases were evaluated by ultrasonography (Schimadzu SDU-1100 color Doppler ultrasound (US) device) preoperatively. The US image showed a hypoechoic and semi-solid mass (Figure 1) with internal echoes of varying diameters (Table 1).

Table 1. — *Demographic and clinical characteristics of the cases*.

Case	Age (years)	Time of cesarean section (years)	No. of previous cesareans	Initial diagnosis	Duration of symptoms (months)	Size of the mass
1	26	3	1	Cyclic pain with the mass		20x25
2	33	5	1	Cyclic pain with the mass	12	20x15
3	29	3	2	Non cyclic pain with the mass	10	21x19
4	28	1.5	2	Cyclic pain with the mass	12	23x22
5	38	2	3	Cyclic pain with the mass	12	15x15

*mm: millimetres.

After the approval of the patients the masses were excised under local anesthesia without damaging the rectus abdominalis muscle. Postoperative histopathological examination of the resected masses was endometriosis (Figure 2).

Discussion

The majority of the AWE have been reported mostly following gynecological and obstetrical operations such as cesarean section, hysterectomies, hysterotomies and tubal ligations [6]. AWE that follows previous caesarean section has an incidence of 0.03%-0.4% [5].

There are different studies evaluating the etiology of AWE. Because it generally occurs after gynecological and obstetrical surgeries, Nirula and Greaney found [7] that inoculation of the surgical wound with endometrial cells may occur during surgery and subsequently hormonal stimuli proliferate these cells in order to form endometrioma in the scar. Nominato *et al*. [8] reported

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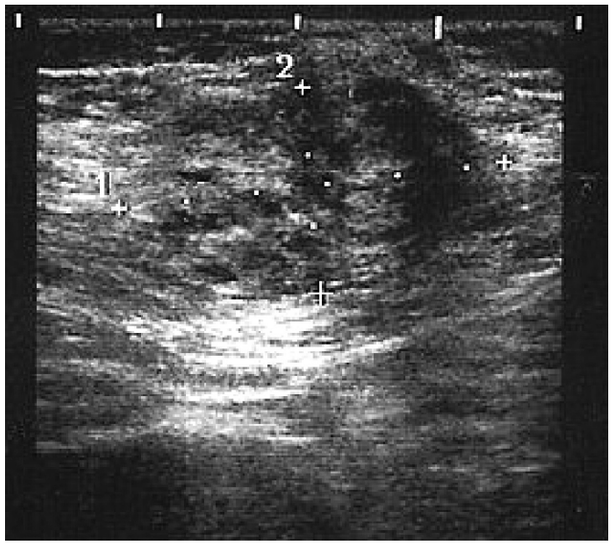
Fig. 1



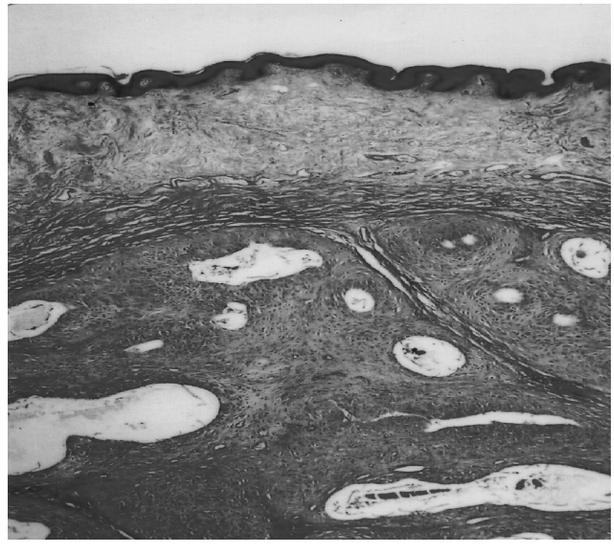


Fig. 2

Figure 1. — Ultrasonographic examination showed a 27x 14 mm hypoechoic and semisolid mass.
Figure 2. — Histopathology of the mass showing endometrial tissue reported as endometriosis.

72 patients with AWE who had had cesarean section (63.8%), episiotomy (26.3%), perineoplasty (2.7%), hysterectomy (1.38%) and abdominoplasty, and found that having had cesarean section statistically significantly increases the risk of AWE. Also this pathology may present without any surgery [8, 9]; coelemic metaplasia, hematogenous and lymphatic spread are also thought to be the possible mechanisms of this pathology [10]. We think that the etiology of our cases is inoculation of the surgical wound with endometrial cells during the surgery.

The clinical manifestations of AWE may be described as pelvic pain either cyclic with menses or non cyclic and a palpable subcutaneous mass [6]. Diagnosis of AWE is easily diagnosed when pain occurs cyclically and is generally misdiagnosed when the complaint is not cyclic. Khammash *et al*. also reported the symptoms as painful, tender and changing in size in relation to the menstrual cycle [11]. The time from surgery and start of symptoms is reported to be 1.9-7 years in the literature [12, 13]. In the present study, the chief symptom of our cases was a painful mass with varying size.

The initial tool used for diagnostic imaging is US. The image of the mass may appear as cystic or multicystic, hypoechogenic and a semi solid image [14, 15]. Also US guided fine-needle aspiration cytology has been reported to be a definitive diagnostic method in the literature [16-18]. We also evaluated our cases with US preoperatively and found similar data to the literature.

AWE should be treated with total excision of the mass under anesthesia. If there are signs of pelvic endometriosis oral contraceptives, danazol or GnRH analogues may be added to the therapy [19]. We also preferred total excision of the masses under local anesthesia.

Conclusion

In conclusion, although the incidence of AWE is low, clinicians such as gynecologists, obstetricians and general surgeons should be aware of this pathology. When diagnosed accurately, it has an easy treatment and good outcome.

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