British Journal of Medicine & Medical Research
4(17): 3393-3397, 2014

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Case Report: Surgical Scar Endometriosis Following Caesarean Section

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Author's contribution

This whole work was carried out by author TC.

Case Study

Received 4th December 2013
Accepted 15th March 2014
Published 27th March 2014

ABSTRACT

Endometriosis is the presence of functioning endometrium outside the uterus. Endometriosis rarely occurs in the surgical scar of abdominal wall and is difficult to diagnose without pathological assessment. The symptoms are non-specific, typically involving cyclic abdominal wall pain around the incision site at the time for menstruation. It commonly occurs following obstetrical or gynaecological surgical procedures. We report a case of scar endometriosis following caesarean section.

Keywords: Endometriosis; caesarean scar endometriosis; abdominal wall pain.

1. INTRODUCTION

The presence of endometrial glands and stroma outside the uterus is called endometriosis [1]. Endometriosis can be classified as either internal or external endometriosis. External endometriosis is divided into genital and extra-genital endometriosis. Genital endometriosis is located on the genitals or pelvic ligaments and extra-genital endometriosis can be located in various locations such as intestines, lungs, pleura, kidneys and surgical scars [2]. Cutaneous endometriosis mainly exists in abdominal scars following obstetric or gynaecologic surgery [2-4]. The late onset of symptoms after surgery is the usual reason of misdiagnosis.

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Endometriosis in scar tissue is a rare disease which might be difficult to diagnose and should always be considered in evaluation of painful abdominal masses in women [1,5]. However, a mass in a caesarean section scar with symptoms of cyclic pain during menstruation is almost pathognomonic for endometriosis in scar tissue. Incisional hernia, lipoma, suture granuloma and abscess formation should be considered in differential diagnosis. The definitive diagnosis can only be made in the histopathological examination following total excision of the lesion. Although incisional endometriosis after CS is rare, endometriotic lesion in scar tissue should be kept in mind while dealing with painful scar tissues following obstetric and gynaecologic surgical interventions to be able to diagnose and treat this clinical entity correctly and promptly. Here, we report a case of endometriosis in abdominal scar to previous caesarean sections (CS). The definitive treatment was proved by histopathological examination.

2. CASE

The case is presented of a 24-year-old woman with a history of two previous caesarean sections (CS). The patient developed a tumorous mass at the site of the CS scar. The symptom described was a sharp, rarely radiating pain at the site of the mass, occurring especially a few days before the menstruation. The patient did not have any history of endometriosis. The physical examination revealed a firm mass with restricted mobility along the right side of the caesarean section scar. The size of the mass was about 1x1x1cm and all other findings were normal in examination. Ultrasound examination demonstrated a hypo-echogenic solid mass with a maximum diameter of 10.7mm at the right side of the caesarean section scar Fig. 1. The mass was excised totally without any complication and the specimen was sent for histopathological examination, in which the mass was diagnosed as an endometriotic lesion Fig. 2. The patient recovered completely within 3 days and discharged on the fourth day following surgery.

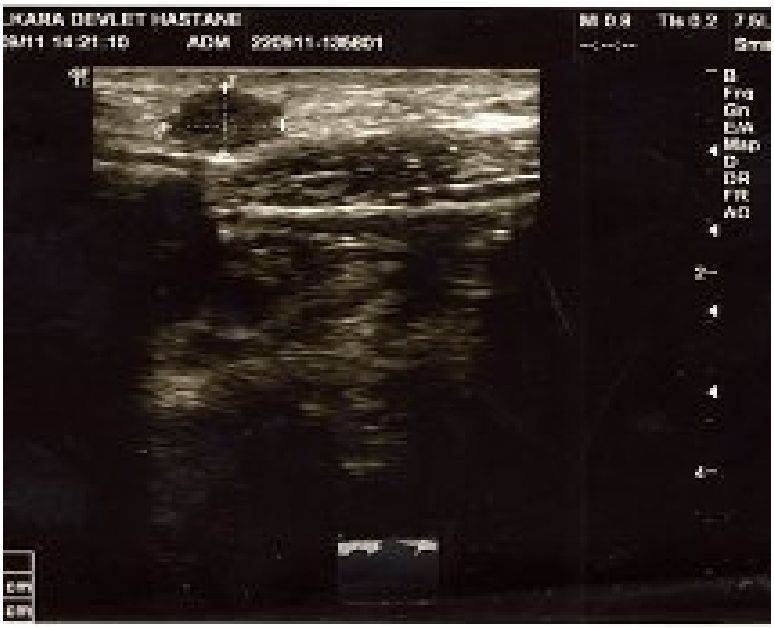

Fig. 1. Ultrasonographic illustration of surgical scar endometriosis: 10.7milimeters diameter hypo-echogenic solid lesion

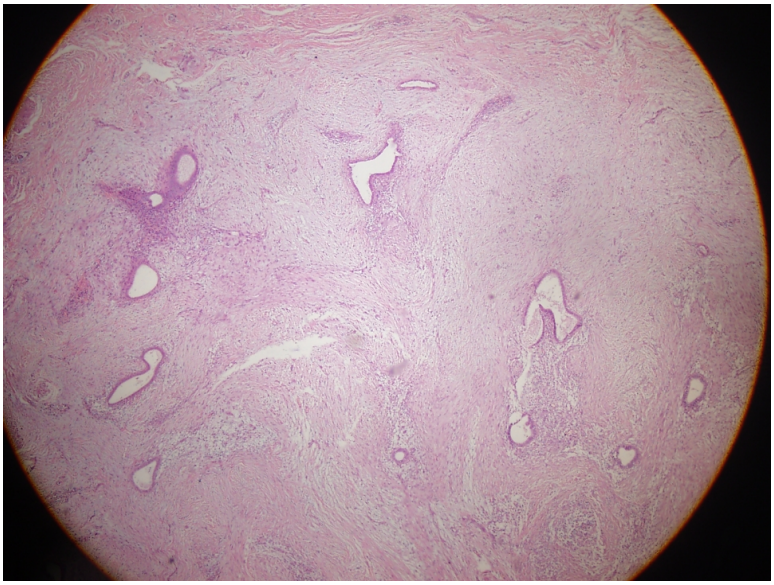

Fig. 2. Histopathological illustration of surgical scar endometriosis: endometrial stroma surrounding endometrial glands in fibrous tissue (HE, X40)

The author declares that 'written informed consent was obtained from the patient for publication of this case report and accompanying images and the author hereby also declares that all examinations and interventions have been examined and approved by the appropriate ethics committee and have therefore been performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki."

3. DISCUSSION

Endometriosis is defined as growth of ectopic endometrial tissue outside the uterine cavity responding to hormonal stimulation [1,6]. Extra-pelvic endometriosis can be seen many sites of the body, including the lungs, appendix, nose, umbilicus, peritoneum and abdominal scars [2,7]. Incisional endometriosis after caesarean section has an incidence of 0.03%- 0.15% [1,2,8]. The cause of incisional endometriosis is unintentionally transplantation of endometrial tissue particles onto the incision site during an abdominal or pelvic surgery [1,9,10] thus, endometriotic lesions can develop in scar tissues, if hormonal status is appropriate for the development of the disease. Unintentionally transplanted endometrial tissue during surgery can form endometriotic lesions at ectopic locations in different clinical forms: e.g., utero-cutaneous fistulae with endometriotic lesions were reported after caesarean section operations [1,5,11,12].

Therapeutic medical modalities utilizing combined oral contraceptives, progestins, medroxyprogesterone acetate, androgenic agents and gonadotropin-releasing hormone agonists are administered to the patients with endometriotic lesions; however, any considerable success in the treatment of the disease has not been established so far [1-3]. Although medical treatment may alleviate symptoms in the women with incisional endometriosis, total surgical excision of incisional endometriotic lesion is the definitive treatment of the disease. Moreover, surgical intervention significantly decreases recurrence rates and histopathological evaluation of the specimen reveals whether any malign tissue is

in the endometriotic lesion. Total surgical excision is considered to be the best option for both of diagnosis and treatment, and excision must be performed with disease-free edges to prevent recurrence [1,2,13,14].

Although incisional endometriosis is after CS is rare, the rate of this clinical entity reported as high as 0.45% in a study [15]. However, the incidence of this disease may increase in the course of time, if the number of CS operations increases. Malignant transformation of this type of endometriosis (adenocarcinoma or clear cell carcinoma) is exceptionally rare [15,16]. In the case of a mass in scar after caesarean section with pain or discomfort before or during menstruation, the clinician should always consider incisional endometriosis in differential diagnosis.

Ultrasound examination is preferred for the diagnosis of incisional endometriosis; additionally, computed tomography, magnetic resonance imaging (MRI), power Doppler ultrasonography and fine needle biopsy can be used for diagnosis. It was reported that the use of diagnostic imaging (including 2-D ultrasound, power Doppler ultrasonography and MRI) in the preoperative assessment of incisional endometriotic lesions were helpful to determine the extent of the disease [17]; the same study mentioned that total surgical excision was crucial for the accurate diagnosis and prevention of recurrence.

4. CONCLUSION

A mass in scar after caesarean section with pain or discomfort before or during menstruation, caesarean scar endometriosis should always be considered in the first place; moreover, although malignant transformation of this type of endometriosis is exceptionally rare, total surgical excision is considered to be the best option for both of diagnosis and treatment.

ACKNOWLEDGEMENTS

I thank Narter Yesildaglar, MD, for checking and editing the manuscript.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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Peer-review history:
The peer review history for this paper can be accessed here:
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