

Abdominal Wall Endometriosis Ten Years after Surgery

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ABSTRACT

Endometriosis is the presence of normal and functional endometrial mucosa outside the uterine cavity. Endometriosis near the operation scar (scar endometrioma) is a rare form of extrapelvic endometriosis. It is mostly seen after C-section deliveries. The time for diagnosis of abdominal wall endometriosis (AWE) in the rectus abdominis muscle (RAM) after surgery varies between 2 months and 4 years. Herein, we report a case of a 42-year-old female of AWE in the RAM which was diagnosed 10 years after C-section delivery.

Key words: Endometriosis; magnetic resonance imaging; rectus abdominis muscle; scar endometrioma

Introduction

Endometriosis is defined as the presence of normal and functional endometrial mucosa and stroma outside the lining of the uterine cavity.^[1,2] The condition is predominantly seen in women of childbearing age.^[2]

The ectopic implants are located in the minor pelvis, ovaries, fallopian tubes, and uterosacral ligaments, while abdominal and perineal scars, umbilicus, spleen, kidneys, gallbladder, pleura, and nasal mucosa are the unusual implantation sites.^[1]

The prevalence of endometriosis has been estimated as 1%–2% among reproductive age women and it is more common (15%–25%) among women with infertility problems.^[1–3] Endometriosis near the operation scar, otherwise called a scar endometrioma, is a rare form of extrapelvic endometriosis which is seen in 0.03%–1.5% of women undergoing C-section delivery.^[1,4]

There is a limited number of cases of abdominal wall endometriosis (AWE) in the rectus abdominis muscle (RAM) in literature since it was first described by Coley in 1993.^[2] In all these reports, cases presented with distinct clinical and pathological findings.^[2–5]

Herein, we present a case of AWE in the RAM diagnosed 10 years after C-section delivery.

Case Report

A 42-year-old woman was referred to our emergency department with a palpable tender mass on the anterior abdominal wall. This lesion which was increasingly enlarging was noticed few days ago. The patient was on the 3rd day of the menstrual cycle and had a 10-year history of C-section incision. She had no previous history of endometriosis. On her physical examination, a firm, nonmobile, and painful mass of 3 cm × 4 cm in diameter was palpated in the upper left RAM. Laboratory results were all within the normal ranges. Ultrasound (US) showed a 3.5 cm × 4.5 cm solid heterogeneous mass located in the RAM. Subsequently, magnetic resonance imaging (MRI) (Siemens, 1.5T; Germany) was performed to further establish the nature and the extension of the lesion. The mass was inhomogeneously hyperintense on T2-weighted images and very slightly hyperintense on T1-weighted images to the surrounding muscle tissue [Figures 1–3]. The images were inhomogeneously enhancing with the gadolinium contrast medium administration. The Pfannenstiel scar of the C-section was only 2 cm lateral to the mass. Differential

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Figure 1: Axial T2-weighted image showing abdominal wall endometriosis in the rectus abdominis muscle, the mass was inhomogeneously hyperintense on T2-weighted images

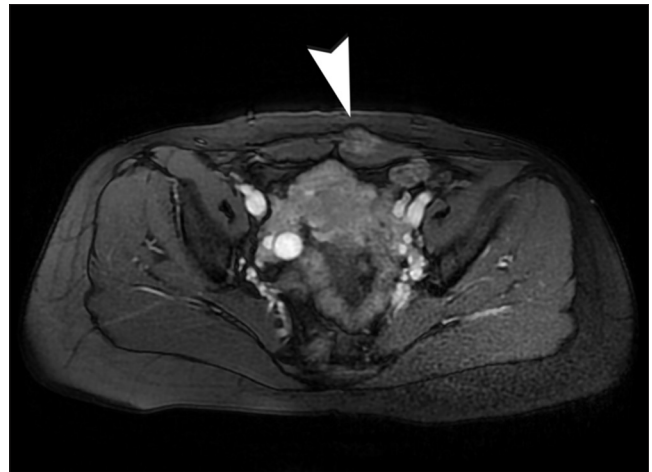


Figure 2: Axial two-dimensional FIESTA fat-saturated image showing slightly hyperintense nodular mass lesion in the left rectus abdominis near the operation scar

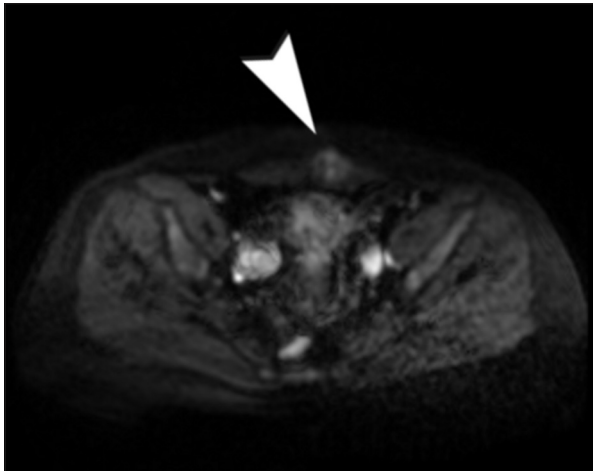


Figure 3: Axial diffusion-weighted imaging 8600 confirmed abdominal wall endometriosis lesion

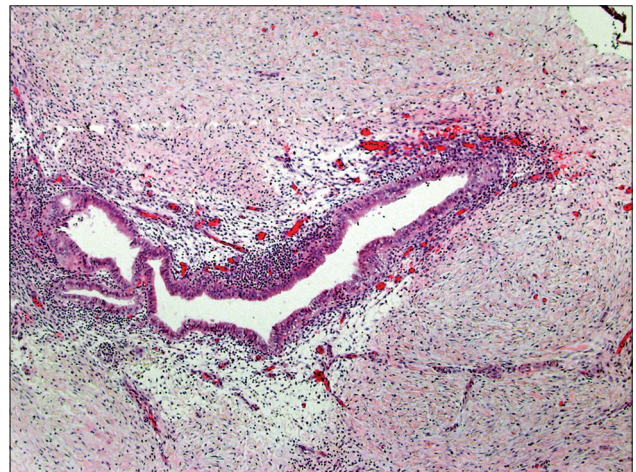


Figure 4: Endometrial glands with a cuff of endometrial stroma surrounded by collagenized fibrous tissue (H and E, $\times 100$)

diagnoses were benign lesions including a desmoid tumor or a pseudotumoral lesion. A written informed consent was obtained from the patient, and excisional biopsy was performed for the definite diagnosis. Histological examination revealed areas of typical endometrial glands surrounded by stroma and bordered by vessels with occasional foci of hemosiderin-laden macrophages typical of endometriosis [Figure 4]. The complaint-free patient is still under follow-up. Her stitch line recovered without any recurrence.

Discussion

Endometriosis was first described by Rokitansky in 1861.^[5] AWE is typically found within the skin or subcutaneous tissues of the abdominal wall. The majority of AWE is located in surgical scars or tracts resulting from invasive abdominopelvic procedures.^[2,4,5] The etiology of these foci of endometriosis is thought to be an iatrogenic transfer of endometrial cells into the surgical or procedural wound.^[2,4,5] The abdominal wall is an uncommon site of extrapelvic (external) endometriosis,

where it usually develops in old surgical scars. Endometriosis has been reported in many types of surgical scars.^[2,4,5]

To the best of our knowledge, there is no case of AWE in the RAM diagnosed over 10 years. Nevertheless, the time interval for developing an ectopic endometrial mass is still a matter of debate. In literature, scar reports were published with varying time intervals for AWE ranging from 2 to 120 months after surgery.^[2-5] It is known that ectopic endometrial cells usually respond to circulating hormones in the same manner as the eutopic endometrium. Hence, we believe that, age of the patient has a major role for the time interval of AWE development. Endometriosis may not show any pathognomonic imaging finding on US, computed tomography, or MRI, as its appearance depends on the phase of the menstrual cycle, the proportion of stromal and glandular elements, the amount of bleeding, and the degree of surrounding inflammatory and fibrotic response.^[2,3] For this nonspecific presentation, a comprehensive radiological

differential diagnosis including benign tumors of lipoma, hemangioma, and desmoid tumors must be kept in mind during the initial evaluation. In addition, such cases are recommended to be evaluated based on the clinical history and symptoms including previous surgeries. Although nonspecific, MRI is the most useful tool in distinguishing the endometrial tissues from the surrounding structures. Similar to the one of the most comprehensive studies in literature carried out by Busard *et al.*,^[3] our case had a hyperintense signal on T2-weighted images and a very slightly hyperintense signal on T1-weighted images to the surrounding muscle tissue.

Therefore, although the definite diagnosis of AWE can only be made by histopathological examination, we recommend using MRI in the differential diagnosis and to visualize the extension of the mass, which both guide the surgeon.

Conclusion

AWE in the RAM should be always kept in mind in women with a painful abdominal mass and a previous history of C-section delivery, regardless of the time elapse between the two events.

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Conflicts of interest

There are no conflicts of interest.

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