Case Report

Caesarean scar endometriosis – A rare entity

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Abstract

Background: Endometriosis is defined as functioning endometrial tissue outside the uterine cavity. Caesarean Scar endometriosis is a rare form of endometriosis that is often mistaken both clinically and with diagnostic imaging for other abnormal conditions. It is a rare disease, with a reported incidence of 0.03–0.45% of all cases of endometriosis. We are reporting a case of 37-year-old multiparous woman, who came to our hospital complaining about intermittent cyclical pain in her lower right abdominal region since 2 years, which increased in severity past 1month. She found a swelling at the right lateral aspect of the caesarean scar since 1month. She was referred to the radiology department for further evaluation. On imaging USG, CT and MRI findings were diagnostic of scar endometrioma which was further confirmed by sonographically guided FNAC.
Keywords: Endometriosis, caesarean scar.

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Received Date: 22/08/2021 Revised Date: 13/09/2021 Accepted Date: 16/10/2021

Access this article online	
Quick Response Code:	Website: www.medpulse.in
	DOI: https://doi.org/10.26611/10132031

INTRODUCTION

Endometriosis is defined as functioning endometrial tissue outside the uterine cavity. Scar endometriosis is a rare form of endometriosis that is usually confused, often mistaken both clinically and with diagnostic imaging for other abnormal conditions such as a suture granuloma, an incisional hernia, or primary or metastatic cancer. It is a rare disease, with a reported incidence of 0.03–0.45% of all cases of endometriosis.[1-2] The cause of endometriosis is unclear, but several theories have been reported. One possible mechanism is retrograde menstruation. This retrograde flow, along with potential hematogenous or lymphatic circulation, may result in the seeding of endometrial tissue in ectopic sites. Another theory is direct implantation of endometrial tissue during surgical procedures like Lower segment caesarean section (LSCS), Hysterectomy, Myomectomy, Episiotomy etc. Other factors, such as genetic, environmental, hormonal, inflammatory or immunological may also result implantation of endometrial tissues on ectopic sites.[3]

CASE DESCRIPTION

A 37-year-old multiparous woman came to our hospital complaining about intermittent pain in her lower right abdominal region since 2 years that keeps getting worse during her cycles from past 1 month and the pain was moderate to severe. There was no significant medical and family history. Her obstetric history was Para 2 live 2 (P2L2) of which last caesarean section was done 5 years back. The caesarean section was performed with Pfannenstiel incision without any post-operative complication. She consulted a gynaecologist for relevant symptoms, but there was no improvement. The pain increased in severity past 1 month along with a swelling on the right lateral aspect of the caesarean scar. Upon physical examination, a solitary mass was found on the right side of the caesarean scar, measuring approximately 3cm × 2cm, which was solid in consistency with bluish discolouration of the overlying skin. Haematological

How to cite this article: Gundra Priyanka, Venkat Ram Reddy Kuchukulla, Rama Krishna Reddy Gaddam, Mandepudi Geethika. Caesarean scar endometriosis – A rare entity. *MedPulse International Journal of Radiology.* December 2021; 20(3): 38-40. http://www.medpulse.in/Radio%20Diagnosis/

work-up showed no abnormal findings. USG findings suggested an ill-defined, hypoechoic, solid lesion measuring approximately 30 mm × 20 mm in the subcutaneous planes of the lower anterior abdominal wall at the lateral aspect of caesarean scar (Figure 1). Routine helical computed tomography (CT) imaging and contrast enhanced Magnetic resonance imaging (CE MRI) of the abdomen and pelvis was performed. Plain CT imaging demonstrated a soft tissue mass in the subcutaneous planes of the right lower abdominal wall, measuring 3.0 x 2.4 cm which is isodense to muscle (Figure 2). CE MRI shows strongly enhancing soft tissue mass in the subcutaneous planes of the lower abdominal wall at right lateral aspect of the scar (Figure 3). Histopathologic analysis of a haematoxylin and eosin photomicrograph of the mass demonstrated the endometriotic nodule with adjacent adipose tissue, at 4X low power view. A 10X view of endometrial glands and stroma was shown with associated blood and fibrin in the fibrous scar. Also, a 40X close up view of the mass demonstrated endometrial glands with tubal metaplasia, sitting with adjacent endometrial stroma and blood.

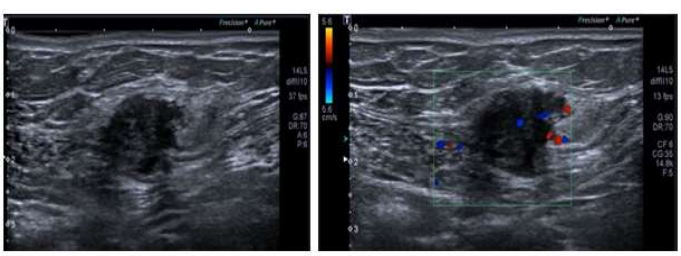

Figure 1

Figure 2A

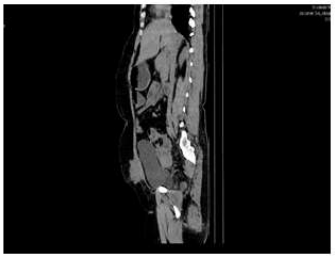

Figure 2B

Figure 1. Transverse sonogram shows well defined hypoechoic solid lesion in the subcutaneous planes of the anterior abdominal wall, at the right lateral aspect of caesarean scar, showing internal vascularity on colour doppler application.
Figure 2A & 2B. Axial and sagittal CT images shows well defined lesion which is isodense to muscle in the subcutaneous planes of lower abdomen at right lateral aspect of caesarean scar.

Figure 3A Figure 3B Figure 3C

Figure 3A. Axial T1-weighted MR image shows lesion in the subcutaneous planes of lower abdomen wall at right lateral aspect of caesarean scar. Lesion is isointense to muscle.
Figure 3B. Axial T2- weighted MR image shows lesion as iso to hyperintense signal intensity mass.
Figure 3C. Axial T1-weighted fat-saturated MR image after injection of contrast medium shows strong enhancement of the lesion.

DISCUSSION

The prevalence of Caesarean-section scar endometriomas is difficult to obtain, primarily due to its varying clinical presentation. While some patients experience the classic features of a palpable, painful mass that has cyclical pain associated with menses, others may be completely asymptomatic with no clinical significance. This is a diagnosis essentially reserved for women of childbearing years following instrumentation of the uterus during a Caesarean section, and the mean age of women who are affected varies from 24-47 years with an average of 31.27years.[4-6] Scar endometriosis may be identified at ultrasonography (US), Computed tomography (CT), and magnetic resonance (MR) imaging in patients who are symptomatic or asymptomatic. In some patients, imaging findings combined with clinical history are strongly suggestive of the diagnosis, whereas in other patients imaging findings are less specific. In these cases, a differential diagnosis is necessary. In some patients, imaging is performed because of the presence of symptoms or a palpable abnormality identified by the referring clinician, whereas in other patients imaging findings are incidental or, if symptoms are present, a pelvic or abdominal wall lesion is not specifically suspected. The appearance of scar endometriosis at US, CT, and MR imaging depends on the phase of the

patient's menstrual cycle, the chronicity of the process, the number of stromal and glandular elements, and the amount of bleeding and associated inflammation. These sonographic findings are nonspecific, and a wide spectrum of disorders presenting as a mass in the abdominal wall should be considered in the imaging differential diagnosis. This should include neoplasms, such as a sarcoma, desmoid tumor, lymphoma, or metastasis, and non-neoplastic causes, such as a suture granuloma, ventral hernia, hematoma, or abscess.[7-8] Sonography may be able to exclude non-neoplastic conditions in view of the solid appearance and vascular nature of abdominal wall endometriomas. The CT and MR characteristics of abdominal wall endometriosis are nonspecific also, both showing a solid enhancing mass in the abdominal wall.[9] The major role of CT and MRI may be to depict the extent of the disease preoperatively. The final diagnosis was preoperatively made by sonographically guided FNA. Sonographically guided FNA is a rapid and accurate diagnostic procedure in women with abdominal wall masses associated with endometriosis, enabling malignancy to be excluded and a definitive treatment to be defined.[10] Wide excision with atleast 1 cm margin is considered the treatment of choice for caesarean-section scar endometriomas in order to prevent recurrence as well as to avoid possible malignant transformation. Depending on the amount that needs to be resected as well as depth of invasion, patients may require skin flap transplantation or mesh to cover the fascial defect.

CONCLUSION

Abdominal wall endometriosis after a caesarean section is more frequent than generally assumed. Clinically it is often misdiagnosed because endometriosis may occur years after the caesarean section, the pain is often noncyclic in nature, and there is not always a palpable mass. The sonographic finding of a solid mass in the abdominal wall is not pathognomonic for endometriosis, but if located close to a caesarean section scar with cyclical pain, it should be of prime consideration in the differential diagnosis.

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Source of Support: None Declared
Conflict of Interest: None Declared