CASE REPORT

Scar Endometriosis: A Case Report of a Rare Complication of Laparotomy for Ectopic Pregnancy

Kanan P Kotdawala[1] Manjusha Agrawal[2], Vaishali Ambatkar[3]

Abstract

Background: The presence of endometrium outside the uterine cavity is known as endometriosis. Scar endometriosis is an endometriosis present in or connected to a previous scar and is a relatively rare entity. Generally, a history of prior laparotomy, mostly cesarean section, is elicited.

Case Report: A 28-year-old female, Para-2 Live-2 with exploratory laparotomy for ectopic pregnancy; presented to our hospital with a complaint of pain in the abdomen during menses for the past 1 year. She also complained of swelling in the lower abdomen since 10 months. She had two normal vaginal deliveries and history of exploratory laparotomy 3 years back for ruptured ectopic pregnancy of 2 months. A curved incision was placed around the nodule The nodule of around 3 cm × 2 cm was excised from the subcutaneous tissue extending up to the right rectus muscle and the defect was repaired with Vicryl 2-0 RB and closure of fat plane and skin was performed.

Discussion: Scar endometriosis is an infrequent type of extrapelvic endometriosis. The incidence of scar endometriosis is 0.03–0.15% of all cases of endometriosis. The generally accepted hypothesis for scar endometriosis is "latrogenic/accidental implantation of endometrium in the wound during a laparotomy/laparoscopy". Ultrasonogram (USG) scan and computerized tomography (CT) scan would ascertain the diagnosis in most cases and also act as guiding tools for fine-needle aspiration of such masses; especially to exclude malignancy. Management generally involves a wide local excision of the lesion. Sometimes, surgical excision may be combined with postoperative adjuvant therapy like gonadotropin-releasing hormone (GnRH) analog or dienogest. Primary prevention is always better than treating it later.

Conclusion: To conclude, we can say that women presenting with a painful nodule near any laparotomy scar with cyclical/continuous pain which increases in size during the menstruation cycle should be suspected of scar endometriosis.

Keywords: Caesarean section, Ectopic pregnancy, Endometriosis, Laparotomy, Scar endometriosis.

Journal of South Asian Federation of Obstetrics and Gynaecology (2021): 10.5005/jp-journals-10006-1866

Introduction

The presence of endometrium outside the uterine cavity is known as endometriosis.[1] Endometriosis occurs in 5–10% of all women. It is one of the most ubiquitous and enigmatic diseases, that has troubled mankind for many years. Of late it is being diagnosed in increasing numbers despite much researches and new advances. Scar endometriosis is an endometriosis present in or connected to a previous scar and is a relatively rare entity. Generally, a history of prior laparotomy, mostly cesarean section, is elicited. At times other pelvic surgeries like hysterectomy, oophorectomy, hysterotomy for termination of pregnancy, and unspecified pelvic pregnancy or even episiotomy may be present. A thorough history and physical examination are the keys to establish a correct diagnosis.[2]

[1–3]Department of OBGY, AVBRH, DMIMS, Wardha, Maharashtra, India

Corresponding Author: Kanan P Kotdawala, Department of OBGY, AVBRH, DMIMS, Wardha, Maharashtra, India, Phone: +91 9429900533, e-mail: kotdawalak@gmail.com

How to cite this article: Kotdawala K P, Agrawal M, Ambatkar V. Scar Endometriosis: A Case Report of a Rare Complication of Laparotomy for Ectopic Pregnancy. J South Asian Feder Obst Gynae 2021;13(1):68–70.

Source of support: Nil

Conflict of interest: None

Case Report

A 28-year-old female, Para-2 Live-2 with exploratory laparotomy for ectopic pregnancy; presented to our hospital with a complaint of pain in the abdomen during menses for the past 1 year. She also complained of swelling in the lower abdomen since 10 months. She had two normal vaginal deliveries and history of exploratory laparotomy 3 years back for ruptured ectopic pregnancy of 2 months. At that time the postoperative period was uneventful, and the patient was discharged after one week. The patient had no symptoms and then she developed pain in the scar area before 12 months. The pain and the size of the swelling increase in intensity during menstruation. Her menstrual cycles are regular with average flow in each cycle. She had no complaints regarding micturition and defecation. The patient came on the 18th day of menses; at that time there was pain in the nodule, we admitted that patient and followed till menstruation, by that time the size of the nodule increased by 0.5–1 cm and the intensity of pain also increased.

On examination, the vitals were stable. A horizontal lower abdominal scar was present. There was a palpable nodule (size 2.5*1.5 cm) in the middle of the scar which was smooth and tender on palpation. On per speculum examination, a "cervical erosion" was seen and on per vaginal examination; the uterus and cervix were bulky, the uterus was anteverted and anteflexed and both fornices were free. Since surgery was planned, preop evaluation and laboratory tests were performed and were within normal limits.

On ultrasonogram (USG) examination, "there was a well-defined hypoechoic lesion located over the laparotomy scar without gaining vascularity." Contrast enhanced computerized tomography

(CECT) scan was performed, which revealed "well-circumscribed, intensely enhancing lesion measuring 24*12 mm, noted in the right rectus abdominis muscle in the infra-umbilical region extending to adjacent subcutaneous plane measuring 18*13 mm. The conclusion was a possibility of endometrioma or a desmoid tumor. The uterus was reported to be bulky (size 8.2*5.7*4.2 cm) (Fig. 1)".

A curved incision was placed around the nodule The nodule of around 3 cm× 2 cm was excised from the subcutaneous tissue extending up to the right rectus muscle and the defect was repaired with Vicryl 2-0 RB and closure of fat plane and skin was performed. The specimen was sent to the histopathology department. The postoperative period was uneventful and the patient recovered well. Stitches were removed on day 9 of the procedure, the patient was symptom-free and was discharged (Fig. 2).

Histopathological examination of the lesion showed fibro-fatty tissue entrapping multiple endometrial glands, these glands were in approximation to areas of stromal hyperplasia. A few areas in the section showed focal lymphoid cell infiltration along with interspersed capillaries. These features were suggestive of "scar endometriosis with chronic nonspecific inflammatory granulation tissue".

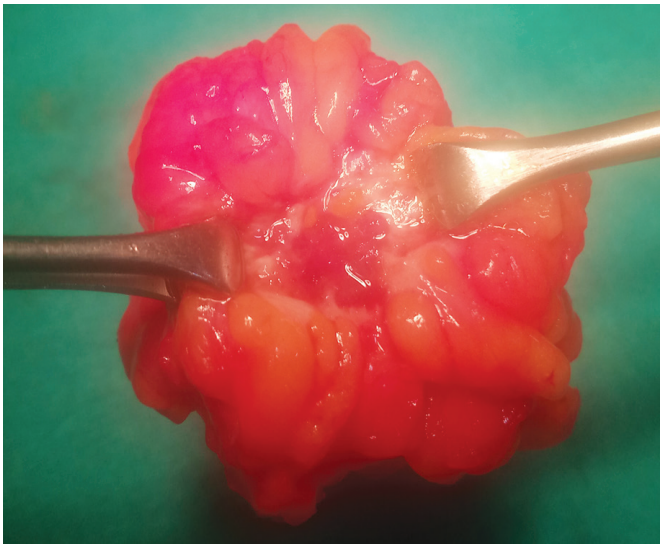

Fig. 2: An excised nodule from the previous scar site suspected to be scar endometriosis

Discussion

Endometriosis; the "ectopic endometrial tissue"; is encountered in 8–15% of gynecological surgeries. Pelvic endometriosis is the most common entity. Extrapelvic endometriosis, although very uncommon, has been reported from almost every organ and tissue in the body. Scar endometriosis is an infrequent type of extrapelvic endometriosis. The incidence of scar endometriosis is 0.03–0.15% of all cases of endometriosis. The reported incidence of scar endometriosis following a cesarean section ranges from 0.2% to 0.8% in the literature.[2] The generally accepted hypothesis for scar endometriosis is "Iatrogenic/accidental implantation of endometrium in the wound during a laparotomy/laparoscopy".[3] Generally, the prior surgery reported is on the uterine cavity (mostly cesarean section or hysterotomy), however, scar endometriosis is reported even after a tubectomy. Sometimes any surgery for pelvic endometriosis including oophorectomy may also lead to scar endometriosis.

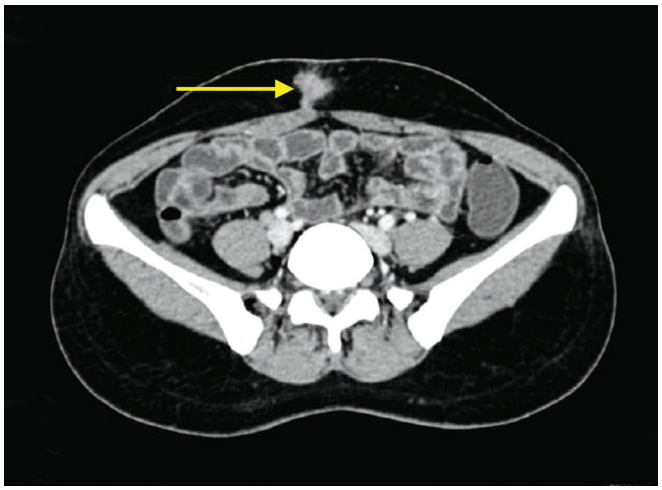

Fig. 1: Well-circumscribed, contrast-enhancing lesion in the right rectus muscle and adjacent subcutaneous plane

Due to the late onset of symptoms, after few years of surgery, a direct diagnosis of scar endometriosis becomes difficult and we need to take in to account some other possibilities as well, for example, organized hematoma, stitch abscess granuloma, incisional hernia, and neoplasms such as lymphoma, sarcoma, desmoid tumor, or metastatic cancer.[2] The classical symptoms of scar endometriosis are cyclical changes in the intensity of pain and size of endometrial implants during the menstrual cycle.[3] Initially, the pain intensity is more during menses but after sometime, the pain becomes continuous throughout the menstrual cycle. The patient usually complains of tenderness and a raised, unsightly hypertrophic scar. Scar endometriosis patients often end up with general surgeons because of this confusing scenario.

USG scan and CT scan would ascertain the diagnosis in most cases and also act as guiding tools for fine-needle aspiration of such masses; especially to exclude malignancy.[4]

Management generally involves a wide local excision of the lesion. The lesion is generally confined to the subcutaneous plane, rectus sheath, and rectus muscle and rarely it penetrates (goes) behind the muscle towards the peritoneal cavity. Recurrences do happen in cases of incomplete excision or spreading of endometriosis during the surgery. Sometimes, surgical excision may be combined with postoperative adjuvant therapy like gonadotropin-releasing hormone (GnRH) analog or dienogest. Primary prevention is always better than treating it later, and hence care during primary surgery will eliminate or decrease the endometrial spillage. Thorough irrigation of the pelvic cavity and using different sutures, needles, and gloves for closing the rectus sheath and skin can reduce the possibility of scar endometriosis.[3]

Common histological findings are the presence of ectopic glandular endometrium; spindled endometrial stroma and hemosiderin deposition either in macrophages or stroma. Sometimes glands and stroma may be obscured by hemorrhage.

All endometriosis lesions including scar endometriosis can become malignant. This is quite rare (0.3–1% of scar endometriomas) and the commonest histological subtype is clear cell carcinoma and is the most common histological subtype.

Multiple recurrences may indicate malignant conversions and hence the value of long follow-up.

Conclusion

To conclude, we can say that women presenting with a painful nodule near any laparotomy scar with cyclic/continuous pain that increases in size during the menstruation cycle should be suspected of scar endometriosis. Thorough history taking with sonography of local scar site and when possible CT scan should be performed and once the diagnosis is made the patient should be operated for the same. The histopathology report of nodule further confirms the diagnosis. This entity can be debilitating and early diagnosis and complete surgery should be the norm.

Orcid

Kanan P Kotdawala: 0000-0002-3167-875X

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