ABDOMINAL WALL ENDOMETRIOSIS: A CASE REPORT FROM JIMMA UNIVERSITY MEDICAL CENTRE, ETHIOPIA

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ABSTRACT

BACKGROUND: Abdominal wall endometriosis is a rare condition, often occurring as a complication following gynecologic surgery, especially cesarean section. Its diagnosis is frequently delayed due to non-specific symptoms and a wide range of differential diagnoses. We report here a case of abdominal wall endometriosis following caesarean delivery in a young woman.

CASE PRESENTATION: A 25-year-old woman, para 1 (caesarean section), presented with cyclic left lower abdominal pain and swelling, worsening during menstruation. Physical examination revealed a firm, nontender mass near the caesarean scar on the left lower abdominal quadrant. Imaging studies including ultrasound and color Doppler identified a hypoechoic lesion in the rectus abdominis muscle with internal vascularity. Fine needle aspiration cytology supported a diagnosis of endometriosis. Surgical excision under spinal anaesthesia was performed in complete removal of the lesion, with no postoperative complications. The patient remained symptom-free at six-month follow-up.

CONCLUSION: This case highlights the importance of considering abdominal wall endometriosis in women with cyclical pain and prior uterine surgery. Imaging and histopathology are key to diagnosis, while complete surgical excision remains the definitive treatment.

KEYWORDS: Endometriosis, Abdominal wall, Surgical excision, Ethiopia

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INTRODUCTION

Endometrial tissue outside the uterus is known as endometriosis, can lead to infertility and chronic pain[1].Of women of reproductive age, about 10% are affected and can also show up in the intestine, urinary system, lymph nodes, abdominal wall, and surgical scars, though it is most frequently found in the pelvis. The most frequent extrapelvic site is the abdominal wall, which is typically connected to prior gynecologic surgeries [2, 3]. A diagnosis is frequently made using imaging techniques like ultrasound, CT, or MRI, and it is subsequently verified histologically after surgical excision. A proper diagnosis is crucial since differentiating between abscesses, tumors, granulomas, and cancers is crucial[4]. We reported here a case report of abdominal wall endometriosis, which developed in the previous scar of caesarean section.

Case presentation

This is a 25-year-old para 1 (delivered by cesarean section 5 years back) woman whose last menstruation was one week back before presented at Jimma University Medical Centre (JUMC) gynecologic emergency department with complaints of pain and swelling in her lower left quadrant of abdomen. The pain was cyclic, dull aching and aggravated during monthly menstruation. The patient´s medical history included one caesarean delivery through a Pfannenstiel incision. She was treated repeatedly by unspecified antipain medications and seen multiple times but didn't get any relieve from the pain. Otherwise, she has no history of bleeding from other sites, vomiting, loss of appetite, loss of weight and substance use like alcohol or smoking.

The vital signs were normal with blood pressure 110/70mmhg, pulse rate 82bpm, respiratory rate 22bpm, and temperature 36.7°c. the remarkable finding was on abdominal examination, that revealed a firm lump in the left lower quadrant measuring about 3*2cm which is nontender and located on the left side of the cesarean scar.

Abdominal ultrasonography showed a 41*19mm well defined hypoechoic lesion with internal anechoic areas in the left rectus abdominalis muscle at the site of the lateral margin of the caesarean section scar which has internal vascularity on color doppler study concluding as scar site endometriosis. She also underwent fine aspiration needle cytology (FNAC) revealing low cellular yield containing few flat epithelial clusters, foamy histiocytes and old haemorrhage concluding as endometriosis. She was also imaged abdominopelvic with pre and post contrast CT scan which showed no abnormality. Laboratory investigations results are shown in the Table 1.

Table 1:Laboratory investigations of a patient managed for abdominal scar site endometriosis at JUMC, 2025

Types of investigations	Dates done			Remarks
	7/2/2017	11/2/2017	16/2/2017	
WBC	6900	8250	13,180	
Hgb	14.2	14.4	13.2	
Plt	271,000	291,000	305,000	
HBSAg	Negative			
VDRL	negative			
Urinalysis	Nonrevealing			
Blood group and Rh	O+ve			
Creatinine	0.59			

WBC: white blood cells; Hgb: haemoglobin; Plt: platelet; HBSAg: hepatitis b surface antigen; VDRL: Venereal Disease Research Laboratory test; Rh: rhesus factor

Patient was counselled on the diagnosis and management and informed consent was obtained for surgery. under spinal anaesthesia, wide local resection of the masses measuring 60*40mm was done. The rectus sheath was opened and adhesion of the mass with fascia and muscle released while dissecting the mass from surrounding structure but the peritoneum was not entered. The tissue was sent for histopathology (Figure 1) and that confirmed the diagnosis of endometriosis. The abdominal wall was then closed by absorbable suture.

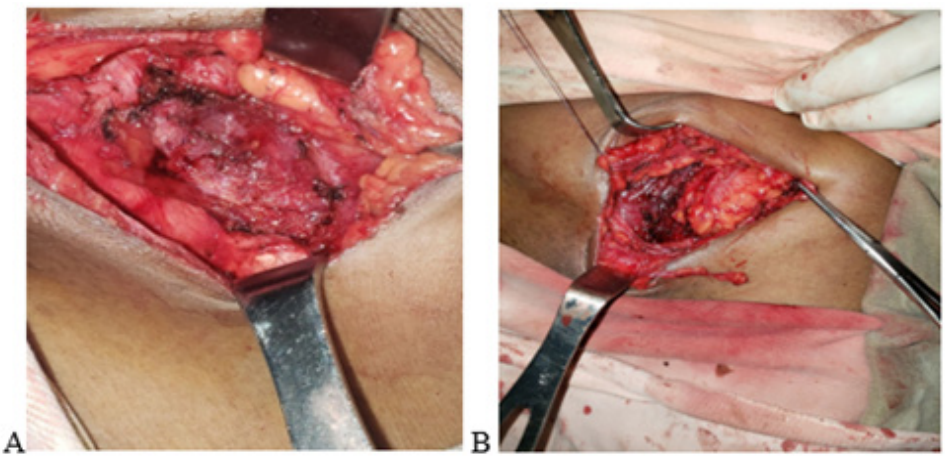

Figure 1: intraoperative mass showing abdominal wall endometriosis: A (Before resection); B (After resection)

There were no complications postoperatively and the patient discharged four days later. The woman was symptom free for endometriosis after 6 months at her scheduled follow up appointment that she was scanned with abdominal ultrasound and normal.

DISCUSSION

The existence of functional endometrial tissue outside the uterus is known as endometriosis. Scar endometriosis is an uncommon condition that can be challenging to diagnose because of its vague symptoms[5] which made our patient to be diagnosed late after several unspecified antipain medications. In our case it was diagnosed with ultrasound showed a well-defined hypoechoic lesion with internal anechoic areas in the left rectus abdominalis muscle at the site of the lateral margin of the caesarean section scar which has internal vascularity on color doppler with features of typical endometriosis Clinically, rectus abdominis muscle mass lesions may be diagnosed as benign or malignant tumors, hernias, lipomas, hematomas, or abscesses[6]. Endometriosis's pathogenesis is still unknown. The most widely accepted hypothesis of implantation, Sampson's, states that endometrial tissue implantation on the peritoneum and ovary occurs as a result of endometrial fragments refluxing via the fallopian tubes during menstruation[7,8].

The formation of endometrial tissue may be caused by abnormal migration or differentiation of the Mullerian ducts[9]. The coelomic metaplasia theory provides an explanation for ovarian endometriosis[10,11].

The endometriosis averagely presented at age of 31 years. It affects 6%–10% of all women and about 35–50% of women who have pelvic pain and infertility. Abdominal wall endometriosis is a rare condition that can develop after open uterine surgeries[12-16]. There are few case reports in Ethiopia on scar endometriosis which is mostly after caesarean section like in our case[16]. Endometrial tissue in the abdominal wall may become implanted by the needle that passes through the endometrium during a caesarean section if the same needle is used to suture it[17].

The ectopic endometrial tissue is linked to an excess of prostaglandins, cytokines, and chemokines, which is why endometriosis should be seen as a chronic inflammatory illness[18]. There is strong evidence that estrogen plays a role in endometrial tissue cells that is not only proliferative but also proinflammatory and antiapoptotic[19]. In women with endometriosis, where local estradiol promotes both inflammation and cell survival, these effects appear to be amplified. The imaging techniques are not specific for the diagnosis, and the symptoms do not always have a cyclical nature[17, 20]. The real incidence of scar endometriosis is estimated at 0.03% to 0.15% with the first symptoms starting around five years after the procedure has launched[21, 22]. Infertility and discomfort, whether cyclic or not, are the primary clinical signs of endometriosis. Up to 30 to 50% of individuals experience endometriosis-associated infertility, which can be brought on by pelvic adhesions, dyspareunia, anomalies of the ectopic endometrium, loss of ovarian function, changes in the fertilization process, and potential ovarian surgery[1, 23].

Early menarche, shorter than 27-day menstrual cycles, few births, age 25–29, Caucasian race, daily heavy alcohol use, excessive consumption of red meat, and smoking are risk factors for endometriosis[24]. The ultrasound is the best choice for the diagnosis of the endometriosis[25]. The mass is characterized as hypoechoic and heterogeneous with scattered internal echoes. In some cases, the masses appear totally solid but occasionally some cystic changes may be seen. Magnetic resonance imaging outweighs ultrasound because of its ability to detect masses that imitate endometriosis on the abdominal wall and should be regarded as the second-line imaging technique. Computed tomography findings depend on the phase of the menstrual cycle. Masses might appear mostly solid, cystic, or as a mixed appearance of both elements[26-28]. It has been suggested to utilize FNAC to examine endometriotic lesions since they can manifest as a mass lesion, frequently with the guidance of ultrasound or CT[29].

Oral contraceptive pills, progestogens, and danazol are not effective medical treatments that cure patients; instead, they only partially relieve symptoms and can have a number of negative side effects. Abdominal wall endometriosis has not shown the same clinical improvement with hormonal treatment as endometriotic implants in other sites[15, 30]. Patch grafting of the defect and extensive surgical excision with a minimum 1 cm margin are the preferred treatments for abdominal wall endometriosis[31]. In our case it is treated with wide local resection including the 1cm margins of around tissue.

Scar endometriosis may be avoided with appropriate attention and surgical methods during caesarean sections. It has been proposed that thorough cleaning with high jet saline solution prior to closure following surgery, particularly uterine and tube manipulations, could reduce the relative chance of developing endometriosis[32, 33] even though in our case the previous caesarean section was not known. Because endometriosis has a significant chance of reoccurring, patients with this condition require follow-up at least for 2 to 3 years. Additionally, in cases with persistent recurrence, the risk of cancer should be ruled out. The risk of developing endometriosis is up to six times higher for first-degree relatives of endometriosis patients. The genetic basis of the illness is still unknown, despite twin studies showing that heritability is roughly 50%[34, 35].

Conclusion

This case emphasizes the significance of considering scar endometriosis in women who experience cyclical pain and have had previous uterine surgery. Imaging and histopathology are critical for diagnosis, while total surgical excision remains the only definitive treatment. Proper surgical methods during caesarean section may lower the likelihood of this syndrome.

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Informed consent/ Patient consent
The patient signed informed consent for the use of case, details and images for publication and scientific purposes.

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