

Incisional endometriosis: A rare cause for a painful scar – A report and commentary

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ABSTRACT

Endometriosis is the presence of endometrial tissue outside the Uterus. The true incidence of endometriosis is not really known, but it is believed that 10-15% of all women in their reproductive age will develop endometriosis and 25-35% of all women who are infertile have endometriosis. Incisional endometriosis (IE) is a rare entity reported in 0.03-1.08% of women following obstetric or gynaecologic surgeries. Most cases reported in literature have appeared after caesarean sections and were often clinically mistaken for hernia, abscess, suture granuloma or lipoma. The diagnosis is frequently made only after excision of the diseased tissue. A case report of a patient with a painful troublesome scar after a caesarean section is presented.

Key words: Endometriosis, incisional endometriosis, painful scar, scar endometriosis

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INTRODUCTION

Endometriosis is the presence of endometrial tissue outside the uterus.¹ The true incidence of endometriosis is not known, but it is believed that 10-15% of all women in their reproductive age develop endometriosis and 25-35% of all women who are infertile have endometriosis.¹ Incisional endometriosis (IE) is a rare entity reported in 0.03-1.08%² of women following obstetric or gynaecological surgeries. Most cases reported in the literature have appeared after caesarean sections and were often clinically mistaken for hernia, abscess, suture granuloma, or lipoma.² The diagnosis is frequently made only after excision of the diseased tissue. A case report of a patient with a painful troublesome scar after a caesarean section has been presented here.

CASE REPORT

A 25-year-old P1L1 lady presented with a 8-month-old mass over her anterior abdominal wall. She complained of incapacitating pain in the swelling, which started a week before menstruation and subsided a week after her periods.

She also reported a corresponding fluctuation in the size of the swelling during each cycle. The patient had undergone LSCS 5 years earlier.

On examination, the swelling was found to be located on the left side of the anterior abdominal wall, close to the previous Pfannenstiel incisional scar. It measured 4 × 4 cm, was firm, had well-defined borders, and was situated in the subcutaneous plane. There was no clinical or sonological evidence of pelvic endometriosis.

Surgical excision was performed, leaving a wide margin on all sides. Perioperatively, swelling was found attached to the anterior rectus sheath, part of which was also excised. The rectus sheath defect measuring 3 × 2 cm was repaired with number Prolene #1 suture. The recovery was uneventful.

Grossly, the excised specimen was an irregular fibro-fatty mass, which on cut section showed a nodular tissue grayish-white in colour with multiple cysts [Figure 1]. Histopathology revealed fibro adipose tissue with scattered endometrial glands surrounded by endometrial stroma [Figure 2]. These features confirmed the diagnosis of IE. The patient was followed for 6 months after the excision. She was completely relieved of her symptoms by then.

COMMENTARY

Endometriosis refers to functional endometrial glands and stroma lying outside the uterine cavity. Endometriosis occurring in a surgical scar is called IE or scar endometriosis. An endometrioma refers to a well-circumscribed mass of endometriosis. Abdominal

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10.4103/0300-1652.107607

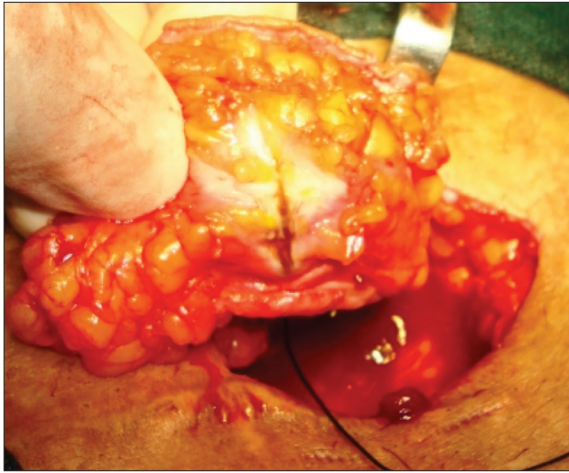


Figure 1: Gross photograph showing gray-white fibrous area with cysts in the subcutaneous fat

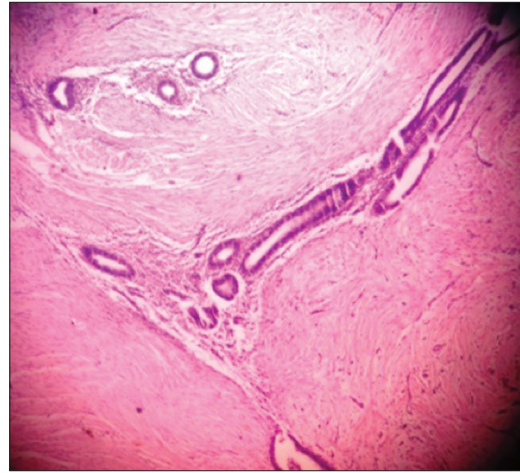


Figure 2: Light microscopy showing endometrial glands and stroma amidst dense fibrous tissue (H and E, x10)

wall endometriomas presents as a painful swelling resembling surgical lesions such as hernias, hematomas, granulomas, abscess, and tumours. Hence, these cases are first reported to general surgeons and are often under reported.^{3,4} The presence of endometriosis in caesarean section scars have been documented in gynaecological literature since 1956.

Scar endometriosis most commonly occurs after operation of the uterus and tubes. Incidence of scar endometriosis following hysterotomy is 1.08-2%, whereas after caesarean section, the incidence is 0.03-0.4%.⁵ Higher incidence after hysterotomy could have been because early decidua has more pluripotential capabilities and can result in cellular replication producing endometriomas.^{6,7}

IE has also been reported in scars resulting from hysterectomy, tubal ligation, ectopic pregnancy, salpingectomy, uterine suspension, inguinal herniorrhaphy, Bartholin cyst excision, episiotomy, laparotomy, abdominoplasty, laparoscopic trocar tract, and needle tract following diagnostic amniocentesis.⁸⁻¹⁰

Time interval between operation and presentation has varied from 3 months to 10 years in different series.⁷ The aetiology of abdominal wall endometrioma is believed to be a result of transportation of endometrial tissue during surgical procedures and subsequently stimulated by oestrogen to produce endometriomas. The simultaneous occurrence of pelvic endometriosis with scar endometriosis is infrequent in one series.⁵ Another study had revealed that, of the patients who develop IE, 25% have concomitant pelvic endometriosis.¹¹ It is observed that endometriomas can occur in the umbilicus even without antecedent surgery.¹² IE is a diagnostic pitfall and should be considered in the differential diagnosis of anterior abdominal wall masses.¹¹ Sometimes, the lesions may show blue-black discoloration and ulcerate, leading to erroneous suspicion of malignancy.

Clinically, the features diagnostic of scar endometriosis are lump in the scar, pain, increasing size of lump, bleeding, and skin discoloration. Cyclicity of symptoms during menstruation is not characteristically observed in all cases, however, if any, it is pathognomonic of scar endometriosis.¹³ Clinically, the lesion appears as a firm nodule and, hence, can be easily evaluated by FNAC. This will help in differentiating it from metastatic disease, desmoid tumour, lipoma, sarcoma, cysts, nodular and proliferative fasciitis, fat necrosis, hematoma, or abscess.^{14,15} Smears from the endometriomas show varying cellularity comprising epithelial and spindle stromal cells with variable number of hemosiderin laden macrophages and inflammatory cells. The presence of any two of the three components (endometrial glands, stromal cells, and hemosiderin laden macrophages) has been used for the cytological diagnosis of endometriosis. The cytological features of scar endometriosis are related to cyclical hormonal changes. In the proliferative phase, the epithelial cells form cohesive sheets of uniform small cells with scant cytoplasm, round to ovoid nuclei with bland chromatin, and occasional non-atypical mitosis. During the secretory phase, the cell size gradually increases with cytoplasmic microvacuolation. The stromal cells show abundant cytoplasm and predecidual change with an epithelioid appearance, causing diagnostic difficulties. The background is generally sanguineous and contains inflammatory cells and histiocytes (with/or without hemosiderin). Squamous, tubal and mucinous metaplasia, and isolated cases of malignant transformation in scar endometriosis have been reported previously.^{14,15}

The imaging modalities are non-specific, but useful in determining the extent of the disease and planning of operative resection, especially in recurrent and large lesions. Therefore, FNAC may be the only diagnostic tool in the evaluation of these lesions, providing rapid and accurate preoperative diagnosis.

Medical management with oral contraceptive pill and

progestogen-and gonadotropin-releasing hormone analogues provide alleviation of symptoms, but recurrence is common after cessation of therapy.

Wide surgical excision with at least 1-cm margin on all sides and patch grafting of the fascial defect, if necessary, is the treatment of choice.¹⁰ It is believed that IE results from iatrogenic inoculation of the fascia or subcutaneous tissues with endometrial cells during invasive abdominopelvic procedures. Therefore, it is strongly recommended that before closure, the abdominal wound must be thoroughly cleaned and irrigated vigorously with saline.

CONCLUSION

In conclusion, one should have high index of suspicion of scar endometriosis when a woman presents with a painful swelling in the abdominal scar especially with a history of previous gynaecological or obstetrical surgery. This condition can be confused with other surgical conditions. Efforts should be made to make a preoperative diagnosis with the help of imaging techniques and FNAC. Medical treatment is not helpful. Wide excision is the treatment of choice. Patient should be followed-up for recurrence.

REFERENCES

1. Tsenov D, Mainkhard K. Endometriosis in the surgical scar from caesarean section. *Akush Ginekol (sofiia)* 2000;39:50-1.
2. Veda P, Srinivasaiah M. Incisional endometriosis: Diagnosed by fine needle aspiration cytology. *J Lab Physicians* 2010;2:117-20.
3. Sengul I, Sengul D, Kahyaoglu S, Kahyaoglu I. Incisional endometriosis: A report of 3 cases. *Can J Surg* 2009;52:444-5.
4. Nirula R, Greaney GC. Incisional endometriosis: An underappreciated diagnosis in general surgery. *J Am Coll Surg* 2000;190:404-7.
5. Chatterjee SK. Scar endometriosis: A clinicopathological study of 17 cases. *Obstet Gynecol* 1980;56:81-4.
6. Blanco RG, Parithivel VS, Shah AK, Gumbs MA, Schein M, Gerst PH. Abdominal wall endometriomas. *Am J Surg* 2003;185:596-8.
7. Goel P, Sood SS, Dalal A, Romilla. Cesarean section endometriosis-Report of two cases. *Indian J Med Sci* 2005;59:495-8.
8. Healy JT, Wilkinson NW, Sawyer M. Abdominal wall endometrioma in a laproscopic trocar tract: A case report. *Am Surg* 1995;61:962-3.
9. Hughes ML, Bartholomew D, Paluzzi M. Abdominal wall endometriosis after amniocentesis: A case report. *J Reprod Med* 1997;42:597-9.
10. Chiang DT, Teh WT. Cutaneous endometriosis: Surgical presentations of a gynaecological condition. *Aust Fam Physician* 2006;35:887-8.
11. Wolf Y, Haddad R, Werbin N, Skornick Y, Kaplan O. Endometriosis in abdominal scars: A diagnostic pitfall. *Am Surg* 1996;62:1042-4.
12. Chatzikokkinou P, Thorfinn J, Angelidis IK, Papa G, Trevisan G. Spontaneous endometriosis in an umbilical skin lesion. *Acta Dermatovenerol Alp Panonica Adriat* 2009;18:126-30.
13. Gajjar KB, Mahendru AA, Khaled MA. Caesarean scar endometriosis presenting as an acute abdomen: A case report and review of literature. *Arch Gynecol Obstet* 2008;277:167-9.
14. Pathan SK, Kapila K, Haji BE, Mallik MK, Al-Ansary TA, George SS, *et al*. Cytomorphological spectrum in scar endometriosis: A study of eight cases. *Cytopathology* 2005;16:94-9.
15. Catalina-Fernández I, López-Presa D, Sáenz-Santamaria J. Fine needle aspiration cytology in cutaneous and subcutaneous endometriosis. *Acta Cytol* 2007;51:380-4.

How to cite this article: Biswas BK, Gupta N, Magon N. Incisional endometriosis: A rare cause for a painful scar - A report and commentary. *Niger Med J* 2012;53:257-9.

Source of Support: Nil, **Conflict of Interest:** None declared.