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Scar endometriosis following laparoscopic surgery: A rare case report

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ABSTRACT

Endometriosis is a major gynaecological disorder that affects 5% to 10% of female in their reproductive years. The ectopic implantation of functioning endometrium outside the uterus, with the pelvis being the most common site, is known as endometriosis. Scar endometriosis is difficult and rare to distinguish from other surgical diseases. It can be found in 0.1 percent of women with a scar on their abdomen. These lesions usually follow gynaecological and obstetrical surgeries including laparotomy and laparoscopic approaches of abdominal and pelvic cases. Following a laparoscopic myomectomy, one patient developed scar endometriosis. This rare condition's diagnosis, pathogenesis and treatment are being discussed.

Keywords: Endometriosis, Scar, Laparoscopic surgery

1. INTRODUCTION

Globally, around 89 million women of reproductive age are affected by endometriosis. This roughly accounts for 7% to 10% of total female population. Endometriosis, which mainly occurs during the reproductive years, is oestrogen dependant. It is associated with significant pain and infertility. Endometrial tissue is at the incision site outside of the uterine cavity, after surgery is called as scar endometriosis. It's a rare type of endometriosis that can be occasionally mistaken for some other surgical or dermatological conditions. Abscess, suture granuloma, desmoid tumour, hematoma, sarcoma, and metastatic malignancy are all common misdiagnoses for this condition.

Extra pelvic endometriosis is most commonly reported after gynaecological and obstetric procedures such as episiotomy, hysterotomy, tubal ligations, hysterectomy and caesarean sections but there have been a few documented instances in the amniocentesis needle tract, laparoscopic trocar tract and after appendicectomy (Gupta et al., 2015). Endometriosis caused by incisions or scars is extreme rare, affecting not more than 1% of individuals. Scar endometriosis is found to occur in 0.3-0.4 percent of Caesarean Section patients and 1-2 percent of hysterotomy patients (Purbadi et al., 2021). Although extra-pelvic endometriosis is not uncommon, it has been confirmed in a several places, including the lungs, lower extremities, and most organs in

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between. The condition may result in unnecessary operation, mental and physical anguish with misdiagnosis to the patient.

The current study examines the literature and reports on a case of scar endometriosis in order to identify physical symptoms and indications so as to facilitate earlier diagnosis and intervention (Vercellini et al., 2014).

2. CASE REPORT

34 years old nulligravida with primary infertility came to gynaecology OPD with chief complaint of swelling in left iliac fossa over scar site since one year associated with low grade, dull aching pain at site of scar which increases during menstruation. This pain used to get relieved for sometime on taking painkillers. Patient is operated case of laparoscopic myomectomy done for multiple fibroid in civil hospital three years ago. General examination was done. On per abdomen examination swelling of 2 x 2 cm over left iliac fossa with tenderness was present (Figure 1). There was moderately pigmented area with firm in consistency on left side laparoscopic scar site. There was no history of bronchial asthma, hypertension, diabetes mellitus, tuberculosis, thyroid disorder or any other chronic medical illness. Routine blood investigations were sent as shown in (Table 1).

Table 1 Blood investigations as below

Sr. No.	Investigation	Measured Value ON ADMISSION
1.	CBC	Hb-10.8gm/dl, MCV-96 fl, Platelet count- 128000/dl, WBC Count- 14200/dl.
2.	KFT	Creatinine: 0.98mg/dl, S. Urea: 29mg/dl, S. Sodium: 134mmol/l, Potassium: 3.8mmol/l.
3.	LFT	Aspartate aminotransferase 25 u/l, alanine aminotransferase 31 u/l, AlkanlinePhophatase105 IU/l, Total Bilirubin: 1.07mg/dl

Ultrasonography of abdomen was advised. USG s/o well defined hypoechoic lesion in left lower abdomen over laparoscopic scar in subcutaneous plane. The lesion has irregular margin showing hypervascularity on Doppler measuring 19.3 x 15.1 mm. multiple intramural fibroid in bulky uterus with largest measuring 3.9 x 2.1 cm. A contrast enhanced computed tomography of abdomen was s/o bulky uterus with multiple fibroids distorting the uterine contour with minimal endometrial collection. Heterogeneously enhancing soft tissue density lesion in subcutaneous and intermuscular plane of left iliac region? Scar granuloma. A needle aspiration biopsy was done from the swelling which indicated scar endometriosis (Nigam et al., 2017).

Figure 1 A healed scar site, with a non mobile, nodular, moderately pigmented

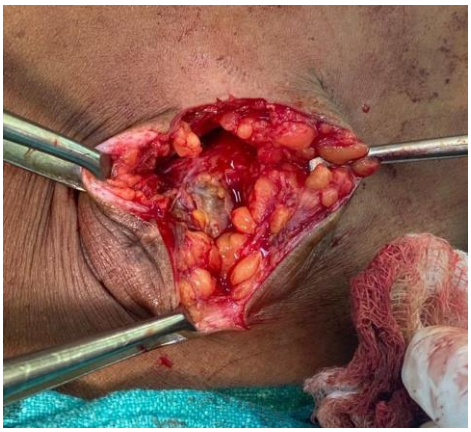

Figure 2 intraoperative scar endometriosis tissue areas in left iliac fossa

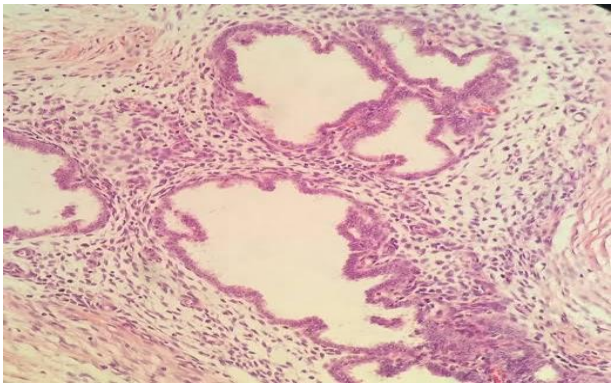

Figure 3 Histopathological Examination of scar endometriosis

Surgical excision was scheduled after a provisional diagnosis of multiple fibroid with scar endometriosis was made. A wide local excision of the endometriotic tissue with Laparoscopic myomectomy was done (Saha et al., 2014). The scar was entirely removed, and the tissue was sent for histological investigation, which revealed numerous, irregular, fibro fatty tissue fragments, as well as greyish black tissue pieces measuring 3.2 x 2 x 1.6 cm and displaying histopathological sign of scar endometriosis (Figure 2 & 3). The patient's recovery went uneventful after surgery.

3. DISCUSSION

Scar endometriosis is a gynaecological condition that primarily affects women who have had a pelvic or abdominal operation in the past. Many hypotheses have been proposed as to why scar endometriosis occurs; however, the most widely recognised theory postulates iatrogenic implantation of endometrial tissue to the edges of wound, following abdominal or pelvic surgery. Scar endometriosis diagnosis is difficult. Classic endometriosis is characterised by cyclical pain and fluctuations during menstruation in the size of endometrial implants. However, only 20% of the individuals have reported these symptoms. A hypertrophic scar and Tenderness on palpation are common complaints (Gupta et al., 2015).

Endometrial tissue at the incision site outside the uterine cavity after surgery is called as scar endometriosis. It is commonly seen among women of reproductive age. Endometriosis manifests itself at pelvic or peritoneal organs as small cysts or nodules which are bluish, black or dark red in colour (Nigam et al., 2017). On histological examination, endometriosis is characterised by ectopic and atypical endometrial glands with hemosiderin deposition in stroma or within the macrophages. Spindled endometrial stroma is also present. The most prevalent cause of scar endometriosis is surgery on the fallopian tubes and uterus. It occurs in 1.08-2 percent of women who have had a hysterectomy, but it occurs in 0.03-0.4% of women who have had a caesarean section. The early decidual tissue has increased pleuripotent capacities, which can lead to cellular replication and endometrioma, which is why endometrioma is more common after hysterotomy. Various reports suggest that the duration between surgery and presentation ranges from 3- 4 months to 10 years. Abdominal wall Endometrioma is hypothesised to be caused by endometrial tissue being transported during surgical operations and then being activated by oestrogen to generate endometrioma. It's rare for pelvic endometriosis and scar endometriosis to develop at the same time. Because iatrogenic endometrial implantation is one of causes of postoperative scar endometriosis, procedures such as endobag and morcellator should be employed for specimen retrival whenever possible (Missmer et al., 2004).

USG and colour Doppler has a significant role in the accurate diagnosis, and authors suggest that when paired with clinical data and assessment, sonography and colour Doppler may play a crucial role in the diagnosis pre operatively. Another reliable diagnostic tool is FNAC. A large, well-circumscribed tumour is frequently visible on CT. Because of its great spatial resolution, MRI is more useful when the lesion is minor, and it also gives better results in detecting the planes between subcutaneous tissue and muscle, as compared to CT scan.

The most common treatment is extensive excision of lesion, which need mesh implantation in some cases medical treatment with progesterone and oral contraceptives. Danazol is ineffective and only provides temporary symptomatic relief (Alhubaishi et al., 2020). Recently, the use of a gonadotrophin Agonist has been reported, although only with a rapid relief in symptoms, without any effect on reducing the size of the lesion. High chances of recurrence need follow up of the patient. Which if occurs, requires re-excision. These patients must be followed up on. After 6 weeks follow up patient had no pain and any other complaints. The patient is now being monitored on a regular basis due to the possibility of recurrence.

4. CONCLUSION

Scar endometriosis is a rather uncommon condition. Any woman who presents with swelling and pain at any incisional site, especially post pelvic surgery, should be treated with caution. Every surgeon should elicit a detailed history followed by a thorough physical examination, and this entity should be kept in mind for differential diagnosis. Other surgical conditions can be mistaken with this one. Imaging modalities and FNAC make it possible to diagnose prior to operative intervention. The treatment is wide excision of the scar endometriosis.

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Informed Consent

Informed Consent was obtained from the patient.

Author's contribution

All the authors contributed equally to the case report.

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Conflicts of interest

The authors declare that there are no conflicts of interests.

Data and materials availability

All data associated with this study are present in the paper.

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