

# Systematic and Comprehensive Approach to Management of Patients with Scar Endometriosis

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**Abstract:** Scar endometriosis has been described following obstetrical and gynaecological surgery. It is a rare condition, though probably on the rise, due to the considerable increase of caesarean sections performed worldwide. Its physiopathology is complex<sup>1</sup>; its symptomatology is rich and diverse but thorough clinical examination along with ultrasound imaging, MRI scanning and pre therapeutic cytological evaluation are usually efficient in diagnosing the condition. Scar endometriosis like a malignancy calls for comprehensive and aggressive management. A strong index for suspicion goes a long way in initiating the process of diagnosis along the right lines. The patient may require concomitant wide surgical excision of this secondary painful lesion along with tackling of the primary pelvic lesions.

**Keywords:** Cyclical Pain, Adenomyosis, abdominal lump, Scar tenderness

## 1. Introduction

Abdominal wall endometriomas are exceedingly rare. They present as an exquisitely painful swelling resembling surgical lesions such as hernias, hematomas, granulomas, abscesses, and tumors.<sup>2</sup> Therefore, these patients are generally referred first to general surgeons. The majority of the scar endometriosis has been reported after obstetrical or gynaecological procedures such as caesarean delivery, hysterotomy, hysterectomy, episiotomy, and tubal ligations but few case reports are following appendicectomy, in the laparoscopic trocar tract, amniocentesis needle tract<sup>3</sup>

Endometriosis was first described by Karl Von Rokitansky in 1860. Endometriosis interna is defined as the presence of endometrial tissue within the myometrium of the uterus and is common in fertile woman.<sup>4</sup> Endometriosis externa is endometrial tissue outside the uterus. Pelvis is the most frequent location of the endometriosis. Extra-pelvic endometriosis may be seen in the surgical scar area and in the subcutaneous tissue after obstetric and gynaecologic surgery.

Endometriosis may be seen after interventions that contain endometrial tissue such as caesarean section. Caesarean section scar endometriosis is a rare sequelae of endometriosis and the rate of surgical scar endometriosis after caesarean section has been reported to range between 0.03-1.7percent.<sup>5</sup> This uncommon clinical condition is a frequently under- appreciated or misdiagnosed phenomenon among clinical specialities.

## 2. Case Presentation

34 year old para 2 presented with pain in the lower left side of her abdomen mainly around LSCS scar site, it was severe, cyclical in nature & typically aggravated during menses, since 2 yrs. The pain was not relieved by medications. Abdominal lump near left edge of pfannensteil scar which increased in size and pain during each menstrual cycle.

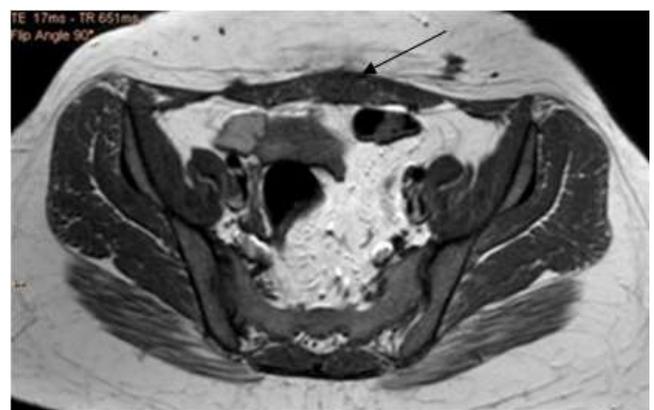
Patient also had menorrhagia and severe dysmenorrhea deep dyspareunia and since 2 years.

LSCS done 6 years back through a lower abdominal transverse incision for placenta previa and was uneventful. Her vitals were stable.

On local examination she had an irregular ill defined mass 4x3 cm felt at the left side of Pfannensteil scar. It was fixed, non tender, and firm in consistency.

Speculum examination was unremarkable. Bimanual examination showed a uterus retroverted, bulky with restricted mobility and obvious nodularity in the posterior fornix.

Blood and urine reports were normal. USG abdomen was noteworthy. It showed 4 hypo echoic ill defined lesions seen in the subcutaneous plane along the edge of the LSCS scar. We proceeded to order an MRI to delineate the exact nature of these unusual lesions.



**Figure 1:** MRI picture, arrow points to abdominal wall lesions.



Figure 2: Endometriotic lesions noted over the uterus

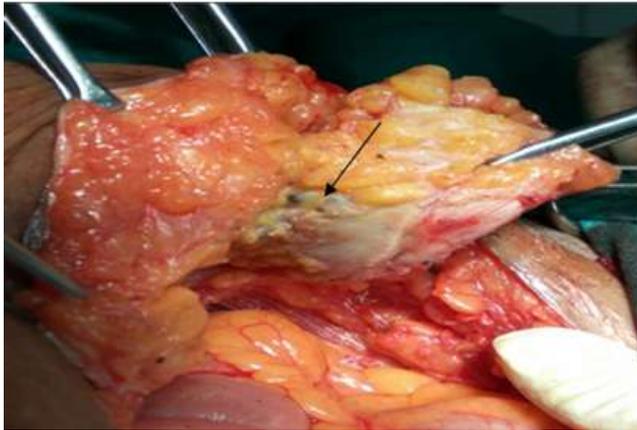


Figure 3 A: Abdominal wall endometriosis

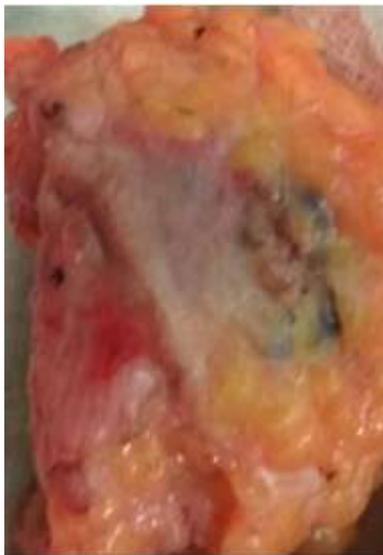


Figure 3 B: Endometriotic Nodule

Picture of surgery to remove abdominal lump. Brown patches and dense, fibrotic attachment to abdominal wall structures evident. To obtain further clarification about the nature of these lesions we did a FNABC (fine needle aspiration biopsy cytology) which showed presence of endometrium line cells. Histopathological examination of the excised abdominal nodules confirmed our suspicion of scar endometriosis as it showed endometrial glands within fibro-fatty tissues.



Figure 4: Histopathological Report

Shows histopathological field of excised abdominal nodules. Arrow points to endometrial glands in fatty tissues.

Patient did well on follow up at 3, 6, 12, 18 and 24 months and she showed no evidence of recurrence. The extended, time-consuming surgery though difficult was successful and completely relieved her of her symptoms.

### 3. Discussion

Endometriosis, the presence of functioning endometrial tissue outside the uterus, is a common gynaecological condition. It's incidence in the general female population is 7-10% and rises to 20-50% in fertile women.<sup>9</sup>

Endometrioma is a well-circumscribed mass of endometriotic tissue. Abdominal wall endometrioma presents as a painful swelling resembling surgical lesions such as hernias, hematomas, granulomas, abscesses, and tumours. The interval between operation and presentation has varied from 3 months to 10 years in different series.<sup>2</sup>

The aetiology of abdominal wall endometrioma is thought to be the transportation of endometrial tissue during surgical procedures and subsequent stimulation by oestrogen to produce endometrioma. The simultaneous occurrence of pelvic endometriosis with scar endometriosis is infrequent. The main cause of extra pelvic implants is obstetrical and gynaecological procedures performed during gestation. Direct mechanical implantation seems to be the most plausible theory for explaining scar endometriosis. During caesarean section, endometrial tissue might be seeded into the wound, and under the same hormonal influences these cells proliferate.<sup>6</sup> They respond to cyclical changes in a similar fashion as endometrium and cause intense scarring.<sup>10</sup>

Cases of abdominal wall scar endometriosis, previously reported in literature, have shown deposits in the dermal and subcutaneous tissue, the rectus abdominis muscle, and the rectus sheath.<sup>2</sup>

The reported incidence of abdominal scar endometriosis following hysterectomy is 1.08-2%, whereas after Caesarean section the incidence is exceedingly low (0.03-0.4%).<sup>2</sup> Very uncommonly, an endometriotic, painful, lump maybe seen in the perineal region along an episiotomy scar. The quoted episiotomy scar endometriosis incidence is about 0.06-0.07%.<sup>7</sup>

Therapeutic management is essentially based on wide surgical excision, with clear margins and reconstruction of damaged tissue. Medical treatment involving hormone suppression has been suggested to relieve clinical symptoms, but only gives partial relief and recurrence after the cessation of medication is constant. Recurrence rates after surgery are variable but seem generally low. No recurrence for a follow-up period ranging from 12 to 60 months is suggestive of cure.

#### 4. Conclusion

Lumps in the abdomen are typically seen by general surgeons, who would be well advised to keep scar endometriosis as a remote differential diagnosis, particularly in menstruating women of reproductive age. Not all women will present so classically as this case, but a strong index of suspicion will go a long way in avoiding mis-diagnosis.

All painful lumps, either abdominal or perineal warrant detailed investigation involving the gynaecological specialist.

USG may give a clue to the nature of these exceedingly painful lumps. MRI will help to delineate their exact nature to a greater extent.

Fine needle aspiration biopsy cytology (FNABC) is an easy pre-operative tool that can go a long way in confirming the clinical suspicion. It certainly aids in guiding the gynaecologist regarding the nature and extent of surgery that the patient will require in order to obtain a complete cure.

Pelvic surgery involving removal of uterus and adnexal endometriotic masses is the primary therapy, but removal of these abdominal lumps may need extensive wide spread dissection. Often a general surgeon familiar with abdominal anatomy is kept on stand –by, or in- fact called to remove the lump. Removing the lump before or after pelvic surgery is immaterial. However, complete removal is the only way if the patient is to achieve complete cure and avoid a local recurrence.

A thorough histopathological examination of the removed lump will establish the existence of this uncommon lesion.

Patients are completely cured following this systematic step-wise, co-ordinated approach to management of an abdominal lump in women of reproductive age.

Endometriosis is a locally spreading benign lesion and almost symptomatic. Published literature does not provide too much on existence and management of such triple manifestations (namely endometriosis interna, endometriosis externa, peripheral lesion of scar endometriosis).

In conclusion, it may be said that, just because a condition is exceedingly rare, does not mean that it does not exist at all. Addressing the complex nature of this surgical disease and applying a multi-prolonged, systematic approach is the only way to achieve complete and lasting cure. Surgery, as is the case with many illnesses is curative and intensely rewarding for both patient and her clinician.

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