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## Original Research Article

# Case series of scar endometriosis- post caesarean section: A diagnostic pitfall

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### ABSTRACT

**Introduction:** The presence and growth of ectopic functional endometrial tissue outside the uterus is called endometriosis among which scar endometriosis is rare and difficult to diagnose. It occurs as a result of obstetrical and gynecological surgeries and can be confused with other surgical conditions.

**Materials and Methods:** We reviewed the case records of patients with the diagnosis of scar endometriosis seen in our hospital from 2015 to 2018.

**Results:** We found six patients of scar endometriosis. The median age of the patients was 28.5 years (range 20-31 years) and median interval from symptoms to treatment was 4 years (range 2-6 years). Four patients had first presented to either the surgery or dermatology physicians. The most common complain being cyclical pain and swelling at local site. Patients underwent wide excision of the mass with no recurrence of symptoms at a follow up ranging from 9 months to 12 years.

**Conclusion:** Confirmation of the diagnosis is histopathology with wide surgical excision being the treatment of choice. We have discussed the pathogenesis, diagnosis and treatment of this condition. Imaging techniques and FNAC are indicated towards better diagnostic approach and avoid confusion with other conditions. Medical treatment is helpful in selected cases only. After studying and presenting this paper we would like to highlight on such a rare condition and prevent its misdiagnosis.

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## 1. Introduction

Rokitansky first described Endometriosis in 1860 and was defined as the presence and proliferation of the endometrium outside the uterine cavity.<sup>1</sup> Pelvic sites such as ovaries, posterior cul-de-sac, uterine ligaments, pelvic peritoneum, bowel, and rectovaginal septum are the common sites.

Nervous system, thorax, urinary tract, gastrointestinal tract, or cutaneous tissues are sites for unusual extrapelvic endometriosis<sup>2</sup> abdominal wall endometriosis is a rare. Misdiagnosis is with condition such as keloids, haematoma, stitch granuloma, abscess, inguinal and incisional hernia.<sup>3</sup> Patient usually presents with painful nodule in a parous

woman with a history of gynecological or obstetrical surgery. The intensity of pain and size of nodule changes with menstrual cycle.<sup>1</sup> We report six cases of scar endometriosis, in our Department of Obstetrics & Gynecology in 3 years.

## 2. Methods and Results

The study was carried out in a tertiary care hospital. The median age of the patients was 28.5 years (range 20-31 years). After attending medicine opd and dermatology opd four and two patients respectively were send to surgeons with diagnosis of stitch granuloma and finally referred to Obstetrics and gynecology department. Five patients had complaints of cyclical pain and swelling while one had non-cyclic pain and swelling at the local site. But all patients

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**Table 1:** Patients details

S.No.	Age	Obstetric score	Interval since previous cesarean section (Years)	Symptoms	Size of lesion	Diagnosis	Management
1.	31	P3L3	6	Pain and swelling	2x2cm	FNAC	Excision
2.	30	P2L2	2	Cyclical pain and swelling	4x4 cm	FNAC	Excision
3.	20	P2L2	4	Cyclical pain and swelling	4x4 cm	USG and FNAC	Excision
4.	24	P2L2A1	4	Pain and swelling	3x3 cm	FNAC	Excision
5.	28	P2L2A2	5	Cyclical pain and swelling	2x2 cm	FNAC	Excision
6.	29	P2L2	2.5	Cyclical pain and swelling	2x2 cm	FNAC	Excision

FNAC- Fine needle aspiration cytology, USG- ultrasonography, P-parity, L- living, A – abortion

had lesion at previous cesarean site only with average size being 2.5 cm (2-4 cm range). The median interval from symptoms to curative surgical procedure was 2 years (2-6 years). Diagnosis was made on FNAC (fine needle aspiration cytology) in four patients. Ultrasound (USG) was done in one patient which suggested scar endometriosis. Wide excision was performed for all. The diagnosis was confirmed on histological examination in all patients. All patients had regular follow-up ranging from 9 months -12 years and there are no recurrences in any patient.

### 3. Discussion

Most common cause of this condition is surgical procedures on the uterus and fallopian tubes. Incidence following hysterotomy being 1.08%-2% and after caesarean section 0.03%-0.4%.<sup>4</sup>

When it comes to abdominal wall masses abdominal wall endometriosis should be considered.<sup>5</sup> Most common complaint being cyclical pain and nodule after gynecological or obstetrical surgery. With menstruation pain and size of nodule vary. Direct implantation theory due to seeding of the endometrial tissue during caesarean section and under estrogen influence these cells proliferate, producing endometriomas is the most acceptable theory.<sup>6</sup> In this the normal menstrual effluent transplanted to the abdominal wall results in subcutaneous endometriosis. Its occurrence is seen at places like episiotomy, hysterotomy, ectopic pregnancy, laparoscopy, tubal ligation, and caesarean section where endometrial tissue came in contact.<sup>7</sup> Endometrioma is formed by metaplasia of the surrounding fascial tissue. When these endometrial tissues reach these sites via lymphatics and hematogenous routes they grow in endometrioma, hence without any surgery abdominal wall endometrioma occurs.<sup>8</sup> Immunogenetic defects theory about endometriosis is the recent hypothesis which explain its development via inadequate response of the peritoneal defensive system to the retrograde flow or implantation of endometrial tissue.<sup>9,10</sup> Post-operative

abdominal lump has high suspicion index. Histology has to be performed for diagnosis of endometriosis. Only 20%-50% of these patients have correct preoperative diagnosis.<sup>11</sup> A thorough examination with imaging techniques and history with presenting complaint in an incisional mass with caesarean section make a good diagnosis. Ultrasonography is the most common investigation which is at lower cost and findings like hypoechoic and heterogeneous mass with messy internal echoes suggest endometriosis. The endometrioma may appear as a circumscribed solid or mixed mass, enhanced by contrast, and show hemorrhages on computed tomography.<sup>12</sup> Because of its high spatial resolution, which allows better distinction of the planes between muscles and abdominal subcutaneous tissue MRI is more effective in small lesions. Better assessed feature with MRI is infiltration of abdominal wall and subcutaneous tissues.<sup>13</sup> FNAC was reported in some studies for confirming the diagnosis.<sup>14</sup> The hallmark of diagnosis is histopathology. With the presence of endometrial glands, stroma, and hemosiderin pigment it is confirmed.<sup>15</sup> With a microscopic examination of a standard hematoxylin and eosin-stained slide diagnosis is confirmed. Furthermore, to clarify diagnosis and exclude malignancy the cytologist's experience is most important.<sup>16</sup> Treatment of choice for scar endometriosis is wide local excision with at least 1 cm margin. Excision becomes difficult in presence of larger and deeper lesions up to the muscle or the fascia. Complete excision of the lesion may entail a synthetic mesh placement or tissue transfer for closure after resection in cases of large lesion.<sup>17</sup> With the use of progestogens, oral contraceptive pills, and danazol there is partial relief of symptoms but does not ablate the lesion. The recent use of the gonadotrophin agonist (Leuprolide acetate), found to provide only prompt improvement in symptoms with no change in the lesion size.<sup>18</sup>

A high jet solution before closure should be used at the end of surgery to prevent its occurrence.<sup>19</sup>

#### 4. Conclusion

In the recent past because of the increasing numbers of caesarean sections scar endometriosis incidence have increased, so one should have a high index of suspicion of scar endometriosis. To avoid confusion with other surgical conditions, imaging techniques and FNAC are indicated towards better diagnostic approach. Wide excision being treatment of choice medical treatment can be used in selected cases. Patient should be followed-up for recurrence.

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#### 6. Conflict of Interest

The authors declare no conflict of interest.

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