



Case Series

Scar endometriosis - A clinical rarity

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Abstract

Scar endometriosis is a rare occurrence. Endometriosis is presence of endometrium at ectopic sites, other than the uterine cavity. Though the common sites of endometriosis are pelvic structures, extra pelvic endometriosis is occasionally seen. But presence of endometriosis in previous incision scars is extremely rare. Endometriosis in abdominal incision sites following Cesarean sections, hysterectomy, ovarian endometrioma removal are described. Very few cases of endometriosis at episiotomy site are also described in literature. This case report describes two such cases of scar endometriosis. The first case had scar endometriosis following a laparotomy done for rudimentary horn pregnancy. The second case had endometriosis in the scar of previous laparoscopic surgeries, performed for ovarian endometrioma.

Key words

Ectopic pregnancy, Endometriosis, Mullerian duct anomalies, Non-communicating horn, Scar endometriosis.

Introduction

Endometriosis of the abdominal wall scars following a Cesarean section or a hysterectomy is a rare vent. Its occurrence on perineum, after episiotomy, is still rare [1]. There are cases reported with scar endometriosis of rectus

abdominus muscle, subcutaneous tissue, subrectal space or involving all the abdominal wall layers. There are cases reported with vertical sub umbilical as well as pfannensteil incision [2]. Whatever is the indication for



surgery, C section or hysterectomy, scar endometriosis has a typical history.

Patients with scar endometriosis complain of pain and swelling at the incision site, which become more prominent during menstrual period. Though the swelling and pain are present even when the woman is not menstruating, a definite and conspicuous enlargement in the size of the swelling and intensity of pain during menstruation are clearly noticed by the patient [3]. On clinical examination, the swelling is tender and occasionally, altered brownish ooze can be expressed from the mass. If such a sign can be elicited, it is the surest sign of scar endometriosis [3].

Generally, these patients go around doctors of various disciplines of Gynecology, Surgery, Dermatology or Gastroenterology etc. The swelling requires to be differentially diagnosed from other anterior abdominal wall swellings like desmoids tumors, lipomas, neurofibromas and incision hernias [3]. The typical history should make the clinician suspect the diagnosis of scar endometriosis.

The diagnosis is purely based on clinical history and examination. Radiological investigations are sometimes useful. Ultrasound can localize a cystic or an altered mixed echogenic tissue in the anterior abdominal wall structures in at least 50% of the cases. MR imaging is more sensitive and specific in effectively diagnosing scar endometriosis and also differentiating it from other possible anterior abdominal wall swellings mimicking endometriosis [4].

Treatment is by surgical excision of the mass. There are reports of success claimed after using leuprolide depot injections in management of scar endometriosis. Though symptomatic relief can be achieved to a certain extent, there is no

change in the dimensions of the lesion after the medical treatment [4].

Case series

Case - 1

23 year old , married woman, G₂P₁L₁ was referred from a district head quarters to tertiary care hospital due to failure to abort a 24 week intra uterine demised fetus. She had a successful pregnancy outcome in the first pregnancy. The second pregnancy went smooth and uncomplicated till 24 weeks gestation, at which time an ultrasound reported that the pregnancy ended in an intrauterine fetal demise. Various methods were unsuccessfully tried to induce abortion. Later she was referred to Visakhapatnam for expert treatment. A repeat ultrasound revealed the same condition of the fetus. Laparotomy was performed and it was found that besides a normal sized uterus on the right side of the pelvis, there was also an enlarged uterine horn, in the left side of the pelvis, harboring the pregnancy. This horn had no communication with the uterus or to the vaginal vault. The horn had a separate tube and ovary for itself. As the horn was enlarged to 28 weeks pregnant uterus size and sufficiently thick myometrium, the dead fetus and placenta were delivered by hysterectomy like incision. Later the anatomy of the reproductive structures was thoroughly checked and confirmed that the woman had non-communicating and yet functional rudimentary uterine horn.

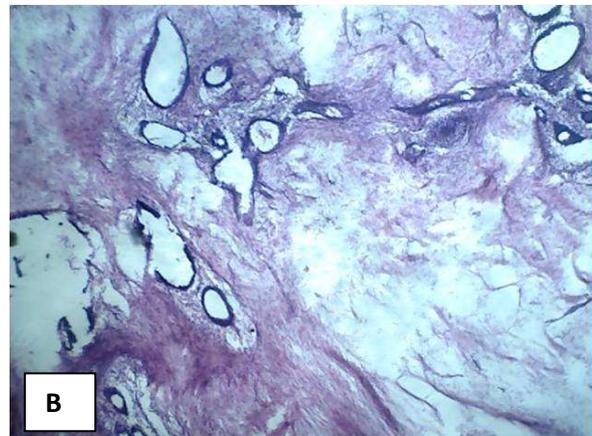
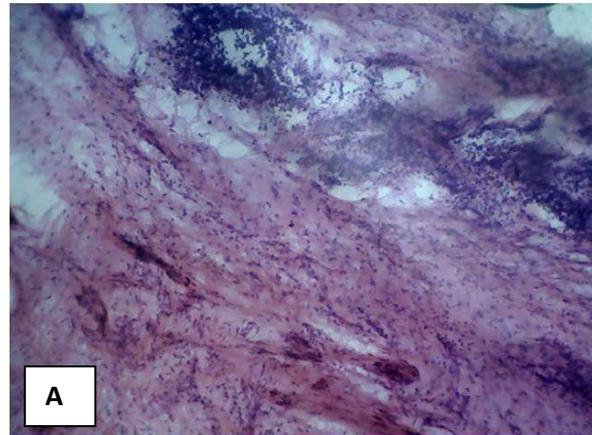
One and half years later, the same woman turned with swelling at the previous scar site, which was typically increasing in size and intractable pain during menstrual periods. With a clinical diagnosis of scar endometriosis, supported by ultrasound diagnosis, and fine needle aspiration cytology (FNAC), the woman was taken for surgical exploration of the swelling. At surgery, it was found that there is a mass of 10x10 cm, in the subrectal plane, deeply

infiltrating rectus abdominis muscle, and had extensive indurations. The mass had a fistulous communication with the rudimentary uterine horn, which got adhered to the parietal wall. A liberal excision of the endometriotic area and the rudimentary uterine horn were removed en mass. **(Photo – 1A, 1B, 1C)** The resultant defect in the anterior abdominal wall required a mesh repair for good closure. The cut section of the mass showed presence of cystic spaces, filled with tarry brown color viscid fluid, with intense surrounding indurations. Histopathology report confirmed the presence of proliferating endometrial glands and stroma in the excised tissue and also in the rudimentary horn. **(Photo – 2A, 2B, 2C)**

Photo – 1A, 1B, 1C: Intra-operative photograph showing rudimentary horn and scar endometriotic tissue.



Photo – 2A, 2B, 2C: Proliferative endometrial glands in excised scar tissue.

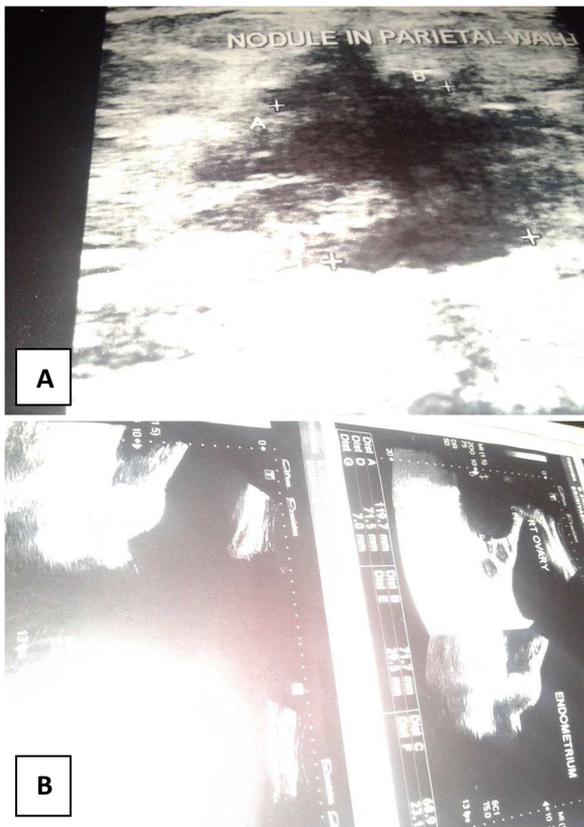


Case - 2

30 years old married woman, who was evaluated for primary infertility was diagnosed to have pelvic endometriosis with bilateral ovarian endometriomas. Laparoscopic removal of the same, with cauterization of the endometriotic spots was undertaken. After 4 years, the woman complained of swelling and pain at the main sub umbilical port incision site,

increasing with menstrual periods. With clinical and radiological (ultrasound) suspicion, scar excision was done. In this case also, a 6X6 cm indurated mass in the rectus muscle, densely adherent to overlying rectus sheath and underlying parietal peritoneum was widely excised. **(Photo – 3A, 3B)** Histopathological examination (HPE) confirmed the endometrial tissue in the excised mass. This woman had Leupride depot injections for six month before this procedure but only pelvic disease resolved to certain extent but the scar disease progressed.

Photo – 3A, 3B: Ultrasound appearance of scar endometriosis.



Discussion

The mechanism of histogenesis in endometriosis was initially described by Sampson in his implantation theory in 1868. This theory suggests that endometriosis results from reflux of the viable endometrial tissue, through

fallopian tubes and implant on parietal and pelvic organs [5]. Substantial evidence exist to support this hypothesis that endometriosis is more common in women with Mullerian Duct outlet obstruction entities [5, 6]. This theory also explains the possible mechanism of scar endometriosis. Iatrogenic implantation of endometrial tissue into the abdominal wall structures is a probable source of scar endometriosis.

In the first case, the woman had Mullerian duct outflow anomaly in the form of non communicating functional rudimentary uterine horn. In the second case, the indication for laparoscopic surgery was itself an endometrioma. Though many women undergo laparoscopic surgeries for endometriosis, it is extremely rare to find a case of scar endometriosis in the port scar. Probably, in the present case few viable endometrial cells might have got implanted through trocar and canula of the laparoscopic equipment [5, 6]. The sonographic findings are nonspecific in majority of the cases and may be better used to exclude neoplasms of abdominal wall, suture granuloma hernia or abscess. The CT or MRI are also nonspecific and show solid enhancing mass in the abdominal wall. The major role of CT or MR imaging is to assess the extent of disease pre operatively [7]. Sonographic guided fine needle aspiration (FNA) is rapid and accurate diagnostic procedure.

Histologically scar endometriosis is characterized by endometrial glands, endometrial spindled stroma and hemosiderin laden macrophages. In many cases, the classical triad is absent. When this occurs the diagnosis may be suggested but confirmation is not possible [8].

Local wide excision with at least 1 cm margin is the accurate treatment. Large masses may need



extensive resection and require mesh enhancement, as done in our case. Recurrence is rare after prompt and wide excision. Medical therapy though described is only of partial recovery [9].

In cases of continuous recurrences malignancy has to be ruled out. To prevent scar endometriosis it has been suggested that at the end of surgery on uterus and tubes, the abdominal wound to be thoroughly cleaned and irrigated with a high jet solution before closure [10].

Conclusion

Scar endometriosis is a rare entity reported in the gynecological literature, and presents in women who have undergone a previous abdominal or pelvic operation. The incidence has been estimated to be only 0.03%- 0.15% of all cases of endometriosis. The diagnosis of scar endometriosis may be challenging. Cyclical changes in the intensity of pain and size of the endometrial implants during menstruation are usually characteristic of classical endometriosis. However, in the largest reported series to date, only 20% of the patients exhibited these symptoms. Patients usually complain of tenderness to palpation and a raised, unsightly hypertrophic scar. Management includes surgical excision or hormonal suppression. It is believed that hormonal suppression is only partially effective and surgical excision of the scar is definitive treatment. Scar endometriosis is rare and often elusive diagnosis that can lead to both patient and physician frustration. One should have a high level of suspicion in diagnosing this entity.

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