Abdominal wall endometriosis: A case report and literature review

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Abstract

Introduction

Endometriosis is a condition, often presented to gynaecologists as a lump in the abdomen. However it can be clinically misdiagnosed, as it may occur years after the caesarean section, the pain may be non-cyclic in nature, and a palpable mass cannot always be found. Diagnosis of the condition needs first to exclude other causes of lumps in the abdominal wall and it is confirmed by histology.

Case report

This is a case report of abdominal wall endometriosis, following two previous caesarean sections, presented with a history of cyclical left sided abdominal pain during her menstrual cycle. Discussion on incidence, pathophysiology, diagnosis, treatment and prevention of this condition follows.

Conclusion

Literature review recommends cleaning and irrigation with high-jet saline solution before closure of abdominal wound. Experts’ opinion is important on prevention of the disease.

Introduction

Endometriosis is defined as the presence of endometrial tissue outside the lining of the uterine cavity. The tissue responds to hormones in a similar manner to that of normally sited endometrium and may result in cyclical symptoms including pain and bleeding during the menstrual cycle¹. It can pose diagnostic dilemmas and should be differentiated from other lumps of the abdominal wall. Diagnosis is usually made by history and confirmed by histology. However, according to literature², the condition may sometimes clinically misdiagnosed, as it may occur years after the caesarean section, the pain may be non-cyclic in nature, and a palpable mass cannot always be found. The aim of the case report presentation is to discuss on the disease and on how it could be prevented.

Case report

A 34 year old para 2 presented with history of cyclical left sided abdominal pain during her menstrual cycle. She also had a history of two previous caesarean sections at 39 weeks, the first one for breech presentation. She reported no allergies, smoking 10 cigarettes per day and had had a diagnostic laparoscopy for endometriosis 3 years before.

On examination, a painful nodule on the left side of the abdomen, 5 cm from the umbilicus and approximately 4 cm above the pfannensteil incision, measuring 3.4 x 2.5 cms, was noted.

Scan confirmed heterogeneous collection in the abdominal wall. Magnetic resonance imaging (MRI) confirmed the finding, as following: In the lower regions and into the left rectus abdominis muscle nodular areas are recognized with high MR signal on TIRM (turbo inversion recovery magnitude) sequences (Figure 10, Figure 11, Figure 12) and on T1 (Figure 7, Figure 8, Figure 9). T1 images in transverse plane (Figure 1, Figure 2, Figure 3, Figure 7, Figure 8, Figure 9) and in coronal plane (Figure 10, Figure 11, Figure 12), as well as T2 images in transverse plane (Figure 4, Figure 5, Figure 6) revealed the small tumour.

Diagnosis of abdominal wall endometriosis was implied. Patient was debriefed and was offered conservative as well as surgical management. GnRH-analogues plus

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add-back therapy (Livial) was tried for 3 months, without any satisfying results reported by the patient. The surgical management was a next step, as symptoms were persisting. She had a subsequent excision of endometriosis from the abdominal wall.

Histopathology confirmed the presence of the ectopic endometrial tissue within the left rectus abdominis muscle. No malignancy was identified. Patient was free of symptoms in the next follow-up appointment.

**Discussion**

The various sites for extra pelvic endometriosis are bladder, kidney, bowel, omentum, lymph nodes, lungs, pleura, extremities, umbilicus, hernial sacs, and abdominal wall. Abdominal wall endometriosis mostly follows obstetrical and gynaecological surgeries. The most common site is a caesarean section scar.

Scar endometriosis most commonly occurs after operation on the uterus and tubes. The incidence is 0.03-0.4% after caesarean section while following hysterotomy is 1.08-2%. The reason for higher incidence after hysterotomy has been given as the early decidua has more pleuripotential capabilities and can result in cellular replication producing endometriomas.

Scar endometriomas are believed to be the result of direct inoculation of the abdominal fascia or subcutaneous tissue with endometrial cells during surgical intervention and subsequently stimulated by oestrogen to produce endometriomas.

This theory is convincingly demonstrated by experiments in which normal menstrual effluent transplanted to the abdominal wall resulted in subcutaneous endometriosis. In clinical practice, its occurrence has been well documented in incisions of any type where there has been possible contact with endometrial tissue, including episiotomy, hysterotomy, ectopic pregnancy, laparoscopy, tubal ligation, and caesarean section. The presence of endometrial tissue can induce metaplasia of the surrounding fascial tissue to form an endometrioma.

Alternatively, endometrial cells may reach a caesarean scar via lymphatic or haematogenous routes and subsequently grow into an endometrioma. This may be a mechanism of rare occurrence of abdominal wall endometrioma without any surgical intervention.

Scar endometriosis is rare, a high index of suspicion is recommended when a
woman presents cyclical pain and lump. Differential diagnosis like stitch granuloma, hernia, lipoma, abscess, inclusion cyst, incisional hernia, desmoid tumour, sarcoma, lymphoma, or primary and metastatic cancer should be considered while assessing the lump on the abdominal wall when history is not classical.

Some authors believe that when the diagnosis is made on clinical grounds, no further investigations are necessary before wide surgical excision which was true in our patients. On the contrary, review of the surgical literature indicates that preoperative diagnosis is often incorrect. It is debatable and depends on the experience of the clinician.

Truly, whenever the diagnosis is uncertain, efforts should be made to make a preoperative diagnosis with the help of imaging techniques and FNAC. Treatment of choice is total wide excision of the lesion, sometimes required mesh placement. Medical treatment with progestogens, oral contraceptive pills or danazol is not effective in ablating the lesion, but gives only partial relief.

Moreover due to side effects such as amenorrhea, weight gain, hirsutism, and acne, compliance is unlikely. Recently there has been reports of use of gonadotrophin agonist which has been found to provide only prompt improvement in symptoms with no change in the lesion size. Malignant change of endometriosis in a caesarean scar (CS) is rare. Long-standing recurrent scar endometriosis could undergo malignant changes and clinician should be aware.

Conclusion
Although the occurrence of abdominal wall scar endometrioma after caesarean section has been a definite entity, steps to prevent this complication have not been delineated. Literature review recommends through cleaning and irrigation with high-jet saline solution before closure of abdominal wound. We request experts’ opinion in prevention of these cases.

Consent
Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

References