CASE REPORT

Abdominal Wall Endometriosis

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ABSTRACT

Abdominal wall endometriosis is a rare condition, which usually develops in a surgical scar of abdominal hysterectomy or Caesarean section. A 38-year-old lady presented in the surgical out patient department complaining of painful swelling in the lower abdomen, at the left edge of the scar of caesarean section. Computerized tomographic (CT) scanning of the pelvis with contrast revealed an enhancing mass in the abdominal wall extending from the skin to the muscle layer. A diagnosis of a tumour or an inflammatory mass was suggested and fine needle aspiration cytology (FNAC) of the lesion was advised to ascertain the nature of the lesion. The mass was removed completely and histopathology of the surgical specimen revealed endometriosis.

Key words: *Abdominal wall. Caesarean section. Endometriosis. Enhancing mass. Calcification.*

INTRODUCTION

Endometriosis is defined as the presence of endometrium like tissue, that is endometrial glands and stroma, outside the uterus.[1] Extra-pelvic endometriosis is known to occur occasionally in other parts of the body. It has even been reported to occur spontaneously in the abdominal wall.[2-4] The abdominal wall is the commonest site of extrapelvic endometriosis, which usually develops in association with a prior surgical scar.[2]

We present a case of abdominal wall endometriosis, which developed in the scar of Caesarean section.

CASE REPORT

A 38-year-old lady presented in the surgical OPD, complaining of a painful swelling in her lower abdomen, at the left edge of the scar of Caesarean section, which she had undergone about 4 years before. The swelling had become noticeable about one year ago and gradually increased in size. The pain in the swelling was a dull ache which would aggravate during menstruation. She did not seek medical help for this until she noted bleeding from the surface of the lesion during her last menstruation. On examination, she was in good health and afebrile. However, there was an angry looking reddish mass at the left edge of the scar, measuring about 4 x 5 cm in size. There was no discharge of pus or blood from the lesion at the time of examination.

Her routine investigations revealed no abnormality. She was advised a CT scan of the pelvis with contrast to look for the deeper extent of the lesion and any communication with uterus. CT scan revealed a well defined, soft tissue density mass, measuring about 3.7 x 3.6 x 3.6 cm in size. It showed an internal tiny calcified focus as well, and diffuse enhancement after contrast administration. The mass was located in the subcutaneous tissue anterior to the muscle layer from which it could not be separated by fat plane. It was also not separable from the overlying skin. There was no extension of mass across the muscle layer into the pelvic cavity or communication between the mass and the uterus. No other enhancing lesion was seen in the pelvis. The uterus and ovaries were normal. No ascites or pelvic lympha-denopathy was seen. The bladder revealed no abnormality. As the nature of lesion could not be ascertained by CT features only, so it was reported as soft tissue tumour of the abdominal wall with inflammatory mass as differential.

The patient was not willing for FNAC of the lesion as she was keen to get rid of the mass. She was operated upon under general anaesthesia. An elliptical incision was made and on exploration the mass was found to be extending from the skin to the external oblique apponeurosis. It was firm in consistency with a piece of proline stitch in it. The mass with overlying skin was excised with one centimeter of healthy tissue. The histopathology of the surgical specimen revealed endometriosis. Her recovery was uneventful. She was discharged on the second postoperative day and stitches were removed on the ninth postoperative day.

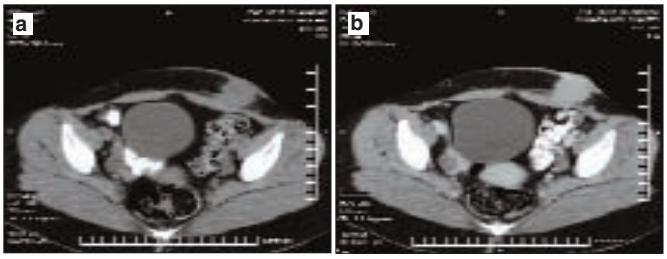

Figure 1: Plain **(a)** and contrast enhanced **(b)** images of the mass in anterior abdominal wall.

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DISCUSSION

Abdominal wall endometriosis is rare, with an incidence of 0.03-0.47% following a Caesarean delivery.[5] This condition is difficult to diagnose as the symptoms may be non-specific. Some of the patients present with pain which may or may not be related to periods. A painful nodule may be palpable on clinical examination. A systematic review of published cohorts revealed that 96% of the patients presented with a mass, 87% presented with pain and 57% presented with cyclic symptoms. Abdominal wall endometriosis was associated with a Caesarean or hysterectomy scar in 57% and 11% of cases, respectively.[6]

There are two leading theories for cause of endometriosis. One hypothesis suggests that mesenchymal cells with retained multipotential may undergo metaplasia into endometriosis. The other theory states that endometrial cells may be transported to ectopic sites forming an endometrioma. When stimulated by estrogen, these cells may proliferate till they become symptomatic.[7] In case of a Caesarean section the usual cause is the needle passing through the endometrium and transplanting endometrial tissue in the abdominal wall when it is being stitched with the same needle. Slowly, the endometrial tissue grows and develops into a mass. Wasfie *et al.*,[8] recently suggested a method to prevent such iatrogenic implants by careful cleaning and vigorous irrigation of the abdominal wall wound with a high-jet saline solution before closure.

Diagnostic imaging techniques used for evaluation of such patients include ultrasonography, CT scanning and magnetic resonance imaging (MRI), depending upon their availability. Ultrasonography is usually the first choice, where the mass appears hypoechoic and heterogeneous with scattered internal echoes. Some of the masses appear completely solid on sonography but occasionally some cystic changes may be seen.[7] Internal vascularity is usually seen on colour flow mapping. Endometriosis has no pathognomonic findings on CT, as appearances depend on the phase of the menstrual cycle, the proportions of stromal and glandular elements, the amount of bleeding, and the degree of surrounding inflammatory and fibrotic response. Masses may appear mostly solid or cystic, or may show a mixed appearance of both solid and cystic elements. Owing to the relatively vascular nature of these lesions, enhancement often occurs on CT scans when intravenous contrast material is used.[9] Due to its very high spatial resolution, MRI enables very small lesions to be detected and can distinguish the haemorrhagic signal of endometriotic lesions. Furthermore, it performs better than the CT scan in detecting the limits between muscles and abdominal subcutaneous tissues.[10] FNAC under ultrasound guidance may be able to make pre-operative diagnosis but if it is inconclusive, core biopsy may be done. Conditions to be considered in differential diagnosis are a suture granuloma, an incisional hernia, and a primary or metastatic tumour.

Therapeutic options for abdominal wall endometriosis include pharmacologic therapy with hormones like progestogen, or surgical excision. The success rate of medical therapy has been reported to be low, offering only temporary alleviation of symptoms often followed by recurrence after cessation of drug intake.[7] Wide surgical excision therefore, is the treatment of choice. Surgical treatment appears to result in a cure more than 95% of the time and recurrence after resection was 4.3%.[6]

Endometriosis of the abdominal wall should be kept in mind for females complaining of pain or a mass in the scar after hysterectomy or Caesarean section. It may be difficult to diagnose as it is comparatively an unknown entity that has not received its due attention in the literature, so far. A search on Pakmedinet did not reveal any report on this subject and this is probably the first case reported on endometriosis of the abdominal wall in a surgical scar.

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