

Endometriosis of the inguinal canal mimicking a hernia

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ABSTRACT

We report a 37-year-old Chinese woman who presented with a groin lump associated with constant and non-catamenial pain. Ultrasonography was suggestive of an inguinal hernia. Intraoperatively, an endometriotic lump with no laparoscopic evidence of endometriosis in the abdominopelvic region was found. Isolated endometriotic lesions in the inguinal canal is a rare occurrence. Surgeons, however, should consider this diagnosis in women of reproductive age who present with a painful groin lump.

Keywords: endometriosis, groin mass, hernia, inguinal canal endometriosis

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INTRODUCTION

Endometriosis affects 8%–15% of women in the reproductive age group.⁽¹⁾ It has been reported to affect all organs except the heart and the spleen.⁽²⁾ The clinical presentation is protean and symptomatology depends on which organ is affected. Both location and size play a more important role in determining the nature of symptoms. These are related to mass effect as well as the vascular nature of the endometriotic lesion. Endometriosis can rarely present as a groin lump. The first such case was described by Allen in 1896.^(1,3) Since then, there has been less than 40 cases reported in the literature. Most commonly, inguinal endometriosis is described in relation to previous abdominal wall or groin incisions. We report a case of a patient with inguinal canal endometriosis mimicking a groin hernia in the absence of any previous surgery.

CASE REPORT

A 37-year-old Chinese woman presented with a right groin lump of two months duration. The lump was discovered incidentally and associated with mild non-cyclical pain. On examination, there was an indistinct swelling over the right groin which was not reducible and had no discernable cough impulse. Pelvic ultrasonography showed a spigelian

hernia at the distal end of the right rectus muscle (Fig. 1). Intraoperatively, there was a 4 cm × 4 cm hard lump attached to the extraperitoneal portion of the round ligament. A frozen section taken from the lump was diagnostic for endometriosis. A diagnostic laparoscopy was done which showed no intraperitoneal endometriosis, nor the presence of any hernia. Wide en-bloc excision of the lump, including the inguinal canal, round ligament and adjacent abdominal wall, was carried out. A polypropylene mesh repair to close the defect was then undertaken. Final histology showed endometrial glands and stroma within the fibrous tissue. The patient was well postoperatively and she was discharged the next day. On follow-up, her groin pain resolved.

DISCUSSION

Endometriosis presenting in the groin is a rare occurrence, with less than 40 reported cases in the English literature. They usually present in women aged 22–46 years with a groin lump,⁽⁴⁾ with a peak incidence occurring between the ages of 30 and 40 years.⁽⁵⁾ The lump may be painful with cyclical exacerbations during menses⁽¹⁾ or painless with only catamenial pain.⁽⁴⁾ The lump may also fluctuate in size with menstruation⁽¹⁾ and exhibit haemorrhagic tendency. A case has been reported of a patient with groin endometriosis presenting with bloody discharge from a groin sinus.⁽¹⁾ Patients may have a history of gynaecological surgery.⁽³⁾ Our patient presented with a painful groin lump whose pain severity and size were independent of the menstrual cycle. Endometriosis can present either as cyclical pain or as chronic pelvic pain.

Endometriosis of the right groin is more common. Various theories have been proposed to explain this. One suggests the presence of atypical lymphatics from the intraperitoneal cavity and pelvis to the right groin,⁽⁴⁾ but anatomical and oncological observations fail to support this. Another theory proposes the presence of a clockwise intraperitoneal fluid circulation.⁽⁴⁾ This was first described by Foster et al⁽⁶⁾ when they noticed that 93% of pleural endometriosis presents on the right side. Here, the flow of fluid was shown with intraperitoneal injection of P32. The direction of flow was from the left peritoneal gutter, across the pelvic floor, up to the right diaphragm and

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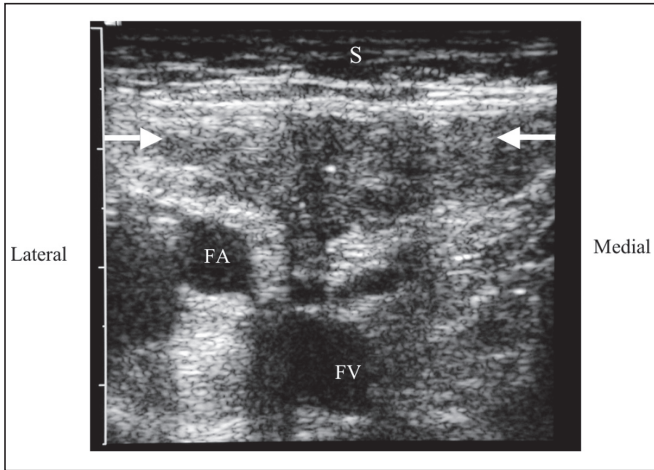


Fig. 1a Transverse US image taken at the right lateral border of the distal end right rectus muscle shows the lump (white arrows). [FA: femoral artery; FV: femoral vein; S: skin]

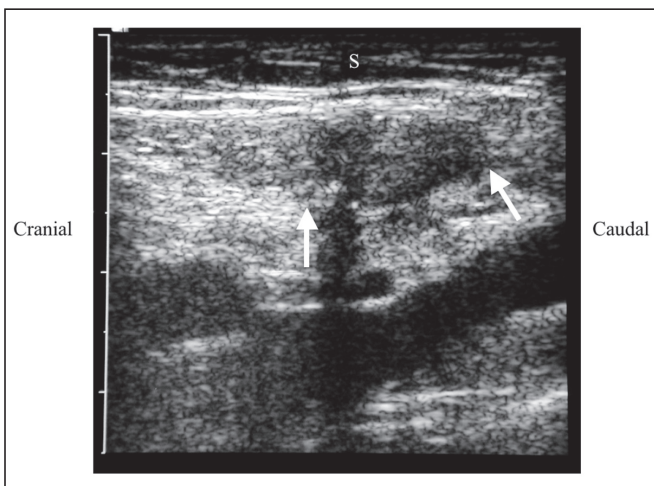


Fig. 1b Longitudinal US image taken at the same level demonstrates an irregular solid nodule (white arrows) [S: skin].

liver capsule. The current was a result of intestinal peristalsis and hydrostatic pressure changes from diaphragmatic movement. The reasons why endometriosis is more common of the right side are that endometrial cells will remain in the right side for a longer time due to gravity before the fluid moves up the right peritoneal gutter, and secondly, the left round ligament may be protected by the sigmoid colon. Unfortunately, for pelvic endometriosis, the right side is as equally affected as the left side. In our case, the patient also presented with the more common right-sided inguinal endometriosis.

In all except two of the cases reported so far,^(1,7) all the women with endometriosis of the inguinal

canal also had concomitant intraperitoneal or pelvic endometriosis. With pre-existing pelvic endometriosis, the round ligament may have formed a route for endometriosis to affect the inguinal canal and groin. Most cases had endometriosis of the external portion of the round ligament. However, two cases have been reported of inguinal hernia with endometriosis but not associated with the round ligament. This may represent intra-abdominal endometriosis within the hernia sac which has prolapsed through the hernia orifice. Our patient did not have any intraperitoneal or pelvic endometriosis, nor a groin hernia. Two popular theories of endometriosis may explain this occurrence in our patient. Firstly, endometrial cells might have spread either locally (from retrograde menstruation into the abdominal cavity and then through the deep inguinal ring) or systemically (through lymphatic spread or haematogenous spread) and deposited in the inguinal canal. Spread through retrograde menstruation is often used to explain why endometriosis occurs in perineal scars, while systemic spread may explain why endometriosis occur at distant sites, such as the lungs.⁽¹⁾ It is believed that ovarian endometriosis is caused by lymphatic spread.⁽⁸⁾ Coelomic metaplasia is believed to be the pathogenesis of endometriosis in women who have undergone hysterectomy and not taking hormone replacement therapy, and in men who are receiving oestrogen therapy for prostatic carcinoma.⁽⁹⁾ Coelomic metaplasia may explain the presence of endometriosis in this patient. It has been reported that ultrasonography and computed tomography may not be useful in the diagnosis of endometriosis in the groin. In our case, ultrasonography detected an irregular solid nodule in the groin region (Fig. 1).

The treatment advocated in endometriosis of the groin has been wide excision of the lesion intact with minimal spillage in order to decrease recurrence.^(2,4,5) In the presence of inguinal disease, laparoscopy is indicated during the same operation to evaluate for concomitant pelvic and intra-abdominal endometriosis. The patient will require a referral to a gynaecologist for further evaluation. Hormonal suppression may have a role in patients with extensive pelvic endometriosis. Medical/hormonal treatment include combined oral contraceptive pills (act by suppression and continuous progestin administration), progestational agents (which decidualise and atrophy the endometrium), GnRH analogues (such as goserelin and leuprolide acetate which cause a hypogonadotrophic-hypogonadism), and Danzol (which inhibits mid-cycle follicle-stimulating hormone and luteinising hormone, and prevents steroidogenesis by the corpus luteum).

In summary, endometriosis of the groin is an unusual and rare occurrence that can mimic common surgical diagnoses, like groin hernias. Treatment involves wide radical excision and a concomitant investigation for pelvic or intra-abdominal endometrioses. Should the disease be detected at inguinal exploration, a laparoscopy is indicated during the same operation. Surgeons should be aware of this condition for diagnosis and effective treatment.

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