CASE REPORT

Jack in the box: inguinal endometriosis

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SUMMARY

A 39-year-old woman with a left-sided inguinal swelling was referred to us with a diagnosis of inguinal hernia. On asking leading questions, the patient gave a typical history of cyclical pain and increased swelling during menstruation. Fine-needle aspiration biopsy revealed endometrial glands. Preoperatively, the extent of the endometriotic lesion was delineated using MRI. The lesion was approached through the patient's caesarean scar for cosmetic reasons and excised in toto. Final diagnosis was round ligament endometriosis. The patient was asymptomatic at 3, 6 and 12 months' follow-up. This case re-emphasises the fact that endometriosis is an enigmatic disease and can be found anywhere in the body. Thus, a woman of reproductive age presenting with any cyclical symptom should be asked about its relation to her menstrual cycle.

BACKGROUND

First reported in 1896,[1] round ligament endometriosis is a rare entity with a reported incidence of 0.07%.[2] Endometriosis in the round ligament can be in the pelvic or inguinal area. Endometriosis of the round ligament in the pelvic area is associated with pelvic endometriosis. However, endometriosis of the round ligament in the inguinal region mostly presents without the evidence of concomitant pelvic endometriosis, thus presenting mostly to general surgeons first rather than to a gynaecologist.[3] A history of catamenial pain and increase in size are the hallmarks of diagnosis. Direct relationship of symptoms to menstruation most often will rule out other inguinal pathologies.

CASE PRESENTATION

A 39-year-old parous woman with a left-sided inguinal swelling was referred to us with the diagnosis of inguinal hernia. She gave a typical history of pain and increased swelling during menstruation for the past 6 months. Her menstrual cycles were normal. She did not have dysmenorrhoea, dyspareunia or pelvic pain.

She had undergone caesarean section 9 years earlier.

Local examination revealed a 4×5 cm swelling in the inguinal region extending up to the labia majora. It was a soft to cystic, irreducible, tender mass with no cough impulse. Absence of variability in swelling during strenuous work, coughing or sneezing, on lifting heavy weights or prolonged standing eliminated the possibility of hernia. Based on the history and examination findings, a tentative diagnosis of inguinal (round ligament) endometriosis was made.

INVESTIGATIONS

Ultrasonography was performed with the aim to establish the diagnosis and rule out a concomitant hernia sac. It demonstrated an ill-defined multilocular heterogenous mass in the superficial plane, inferomedial to the femoral vessels, with minimum vascularity within, and approximately just below the pubic symphysis. The impression given was of extrapelvic endometriosis (figure 1). There was no evidence of pelvic endometriosis.

Fine-needle aspiration biopsy (FNAB) confirmed the diagnosis of endometriosis, revealing the presence of endometrial glands.

MRI was performed to delineate the extent of the lesion in order to facilitate complete excision. It revealed a hyperintense lesion in the superior portion of the labia majora to the left inguinal region, consistent with endometriosis, with thickening and enhancement of the left inguinal ligament (figure 2A, B).

DIFFERENTIAL DIAGNOSIS

Differential diagnosis of a swelling in the groin is broad. Common causes are inguinal or femoral hernia, enlarged inguinal lymph nodes, swellings arising from structures within the skin, such as lipomata and sebaceous cysts, and vascular pathology such as saphena varix and femoral artery aneurysms.

However, association of symptoms with menstruation is strongly suggestive of endometriosis. The possibility of endometriosis arising in the hernia sac and concomitant bowel herniation should be still looked for.

It has been suggested that in women of reproductive age (including elderly perimenopausal women) endometriosis should be a differential diagnosis for groin swellings.[4]

TREATMENT

Local excision of the endometrioma is the treatment of choice. The patient underwent this

Figure 1 Ultrasonography with Doppler showing the endometrioma with minimal vascularity.

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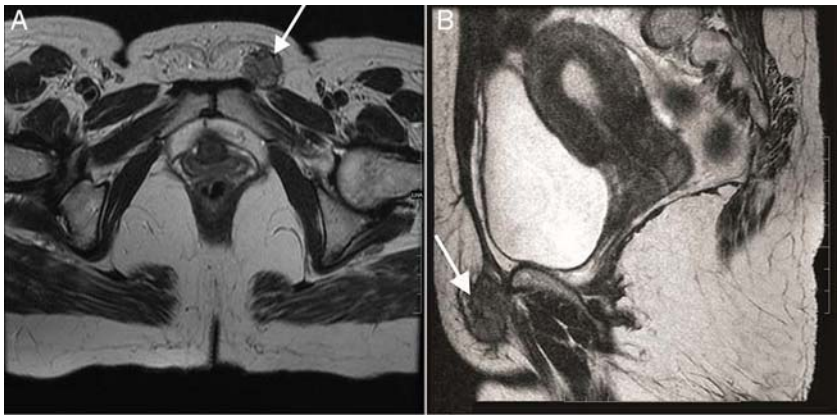

Figure 2 (A) Axial T2-weighted MRI sequence showing a well-defined heterogeneous lobulated lesion in the region of the left round ligament. (B) Sagittal T2-weighted MRI sequence showing a well-defined heterogeneous lobulated lesion in the region of the left round ligament.

procedure under spinal anaesthesia. We approached the swelling through the left half of her previous Pfannenstiel scar for cosmetic reasons. Endometriosis was found to be extending along the round ligament up to its insertion over the labia majora, and was removed in toto and sent for histopathology (figure 3). The round ligament was then suspended to the external oblique aponeurosis. The dissected space was closed in layers and skin approximated with absorbable subcuticular sutures.

OUTCOME AND FOLLOW-UP

Histopathology confirmed the diagnosis. The patient made an uncomplicated recovery and was discharged on day 3. She was not given any suppressive hormone therapy. She was asymptomatic at 3, 6 and 12 months' follow-up.

DISCUSSION

The possible pathogenesis of inguinal endometriosis is direct extension of endometrial tissue along the round ligament.[5] Most cases of inguinal endometriosis are reported on the right side. The hypothesis is that on the left side, the sigmoid colon plays a preventive role.[6] We report a rare case of left-sided round ligament endometriosis.

Usually, a history of catamenial pain and increase in size are the hallmarks of diagnosis. However, endometriosis should also be included in the differential diagnosis of continuous painful groin mass without cyclical exacerbation.[7] The direct relationship of symptoms to menstruation most often will rule out other inguinal pathologies. However, it has to be kept in mind that very often, round ligament endometriosis might have a concomitant hernia sac in the groin swelling.[6] Ultrasonography is the first-line investigation to make the diagnosis as well as to rule out a concomitant hernia, which should be followed up by FNAB for confirmation diagnosis. MRI helps to delineate the extent of the lesion, helping to plan complete excision. A thorough history, clinical examination and preoperative MRI have an important role in ruling out pelvic endometriosis and thus avoiding the need for laparoscopy.[8]

There are conflicting reports of association of inguinal and pelvic endometriosis.[3 9] Studies in women with deep infiltrating endometriosis have revealed round ligament (pelvic region) as one of the frequent possible sites for endometriotic deposits.[10 11]

It is always better to rule out pelvic endometriosis by history, pelvic examination, MRI or laparoscopy (in cases of doubt) because of the paucity of definitive evidence.

Complete excision is the treatment of choice. Postoperative suppressive hormonal therapy is not required in cases of isolated extrapelvic endometriosis.[12]

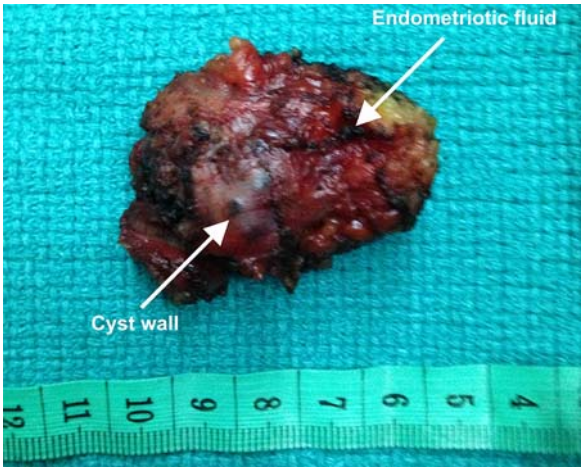

Figure 3 Intact specimen of endometrioma removed in toto.

Learning points

- A woman in her reproductive years presenting with inguinal swelling should be asked for the relation of her symptoms to her menstrual cycle.
- Ultrasonography is the first line of investigation. It also helps to rule out concomitant bowel herniation. Fine-needle aspiration biopsy helps to prove the diagnosis.
- MRI delineates the extent of endometrioma, thus facilitating complete excision and preventing recurrence.
- MRI also helps in ruling out pelvic endometriosis. In most cases, inguinal endometriosis is not associated with pelvic endometriosis.
- Complete excision is the treatment of choice for inguinal/round ligament endometriosis.

Competing interests None.

Patient consent Obtained.

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