

Leiomyoma of the Round Ligament of the Uterus

Case report and review of literature

*Syed M Ali, Kamran A Malik, Hani Al-Qadhi, Muhammad Shafiq

تم رصد حالة ومقارنتها بالدراسات السابقة اكتشاف ورم عضلي أملس في الرباط المستدير بالرحم

سيد أم علي ، كامران ك مالك ، هاني القاضي ، محمد شفيق

الملخص: تعد أورام العضل الأملس في الرباط المستدير بالرحم من الحالات النادرة ويشبه الفتاق الأربي. يمكن الحصول على التشخيص قبل إجراء العملية وذلك عن طريق استخدام التصوير المقطعي للبطن أو عن طريق إجراء استقصاء جراحي في القناة الأربية. وتعتبر العملية الجراحية لاستئصال الورم هي الطريقة العلاجية له.

الكلمات: الرباط المستدير ، ورم عضلي أملس ، رصد حالة ، سلطنة عمان

ABSTRACT: Smooth muscle tumours of the round ligament of the uterus are rare and can mimic an inguinal hernia. Preoperative diagnosis can be established by a computed tomography scan of the abdomen or an exploration of the inguinal canal. Surgical excision is a curative treatment.

Keywords: Round ligament; Leiomyoma; Case report; Oman.

THE ROUND LIGAMENT EXTENDS FROM the uterus through the inguinal canal and terminates in the region of the *mons pubis* and *labia majora*. Embryologically, it is the female equivalent of the *gubernaculum testis*. This structure is responsible for the descent of the ovary from the posterior abdominal wall to the uterus. It is mainly composed of smooth muscle fibres, connective tissue, vessels, and nerves with a mesothelial coating.^{1,2} Leiomyoma of the round ligament is a rare condition occurring predominantly in premenopausal middle-aged women. Abdominal, inguinal, and vulvar locations have been described.³ We report a case of smooth muscle tumour of the right inguinal area, presenting as a painless mass which increased gradually in size. The anatomic location was unique, as the clinical presentation closely resembled an inguinal hernia.

Case report

A 38-year-old woman presented to the surgical outpatient department of Sultan Qaboos University Hospital, Oman, with painless swelling in the right inguinal region. It had been gradually increasing in size for the previous three months and was not reducible without skin changes. She denied any history of fever, weight loss, night sweats, or swelling in other part of her body. The round swelling measured 5 x 5 cm, was irreducible, and non-tender. The cough impulse was, however, equivocal. A working diagnosis of right-sided inguinal hernia was made and, after routine blood tests and without any imaging, surgical exploration of the inguinal region was accomplished under general anaesthesia.

Per-operatively, it was observed she had a rounded swelling arising within the superficial inguinal ring, which, on opening the inguinal canal, was found to be attached to the round ligament [Figure 1]. No hernial sac was identified.

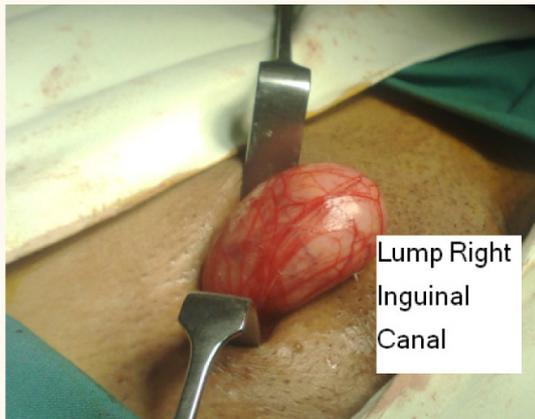


Figure 1: Mass arising from right inguinal canal

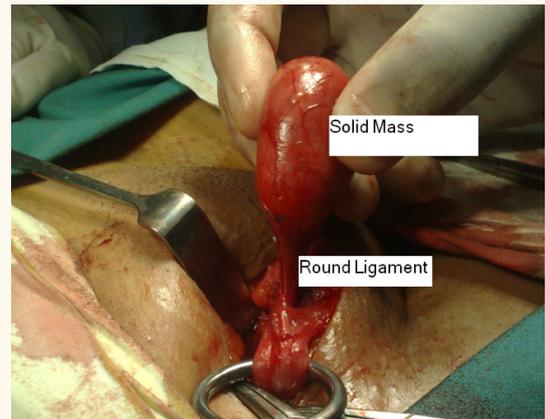


Figure 2: Exploration of inguinal canal

The mass was removed completely [Figure 2] and the histopathology revealed encapsulated firm to hard grey tissue with well-defined spindle cell lesions arranged in interlacing fascicles. The mass was composed of bland cells with cigar-shaped nuclei and eosinophilic cytoplasm consistent with leiomyoma without mitotic figures, atypia, or necrosis.

Discussion

Tumours of the round ligament of the uterus are quite rare. The most commonly found tumours are leiomyomas, followed by endometriosis and mesothelial cysts.^{1,4-6,12} Approximately, one-half to two-thirds of leiomyomas occur in the extra-peritoneal portion of the round ligament and are more common on the right side for unknown reasons.¹ The transformation of the myofibrous structure of the female genital tract to leiomyoma involves somatic mutations of normal smooth muscle and a complex interaction between sex steroids and local growth factors. Estrogen is the major promoter of the myoma growth; however, the role of progesterone is still unclear,^{3,7} as both receptors have been found in the round ligament.⁸

The differentiation between benign and malignant tumors can be difficult as the major criteria for malignancy are mitotic figures, nuclear atypia, and necrosis.^{4,9} In 50% of the reported cases, the lesions are associated with uterine leiomyomas.⁴

Mass lesions that involve the extra-peritoneal portion of the round ligament as it passes through the inguinal ligament can mimic an incarcerated inguinal hernia or inguinal adenopathy. In our case,

the mass presented like an inguinal hernia. Pre-operative imaging techniques such as computed tomography (CT) scans can be helpful in diagnosing the condition, but it is not usually employed before surgical exploration.¹⁰

Leiomyoma presents as a circumscribed, heterogenous, dense mass in CT images.^{1,10,11} It may contain calcifications that may be mottled, whorled, streaked, and curvilinear.¹⁰ Surgical excision of the tumour is adequate treatment as it would distinguish between the rare leiomyoma and an inguinal hernia or adenopathy.¹

Conclusion

A smooth muscle tumour in the round ligament of the uterus in the inguinal region is a rare entity and can be mistaken for an incarcerated inguinal hernia. Diagnosis can be established by a CT scan of the abdomen or surgical exploration. Excision of the lesion provides symptomatic relief to the patient and enables a diagnosis of the exact nature of the swelling.

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