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Case Report

Giant Vulvoinguinal Leiomyomatosis, Diagnostic Approach and Case Report

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Abstract

Leiomyomas are the most common gynaecological and uterine neoplasms; however, vulvar or intraligamentary locations are quite rare. Vulvar leiomyomas are non-specific and camouflaging, they are often painless, solitary and circumscribed, however they are sometimes misinterpreted preoperatively as Bartholin's cysts, abscesses or other benign conditions. We present a case report of a 44-year-old female with a giant vulvoinguinal leiomyoma in an uncommon presentation in the distal insertion of the round ligament.

Keyword: Leiomyomatosis; Uterine Leiomyoma; Uterine Fibroids; Myomectomy; case report.

Introduction

Leiomyomas represent the most common gynaecological and uterine neoplasms. approximately 20% to 30% of women over 35 years of age have uterine leiomyomas that manifest clinically [1] Vulvar leiomyomas are rare, comprising 0.03% of all gynecologic neoplasms and 0.07% of all vulvar masses (frequently mistaken as Bartholin's gland cyst, the most common preoperative diagnosis, because the 2 conditions share some of the same presenting symptoms, such as a painless lump and swelling in the area [2]

Leiomyomas are well-circumscribed benign soft tissue tumour's of mesenchymal origin. Approximately 3.8% of all benign soft tissue tumour's are leiomyomas. Smooth muscle tumours of the vulva are usually divided into three categories: leiomyomas, atypical leiomyomas and leiomyosarcomas, which arise from the smooth muscle within the round ligament, erectile tissue and Dartos muscle. Bartholin's cyst and vulvar leiomyoma can be distinguished by the direction and consistency of the labia minora. If the labia are inverted and the cyst is soft, it is a Bartholin's cyst; if they are inverted and the cyst is hard, it is a vulvar leiomyoma. A vulvar leiomyoma can also be found in the clitoris or hidden by another condition [3]. Leiomyoma of the round ligament is a rare condition that occurs predominantly in middle-aged premenopausal women. There are previous descriptions of tumours in abdominal, inguinal and vulvar locations. Fifty per cent of leiomyomas of the round ligament are uterine fibroids. They usually arise from the extraperitoneal end of the ligamentum flavum and are more common on the right side with no clear explanation for their [4]. The most frequently found tumors in the round ligament are leiomyomas. They may mimic inguinal lymphadenopathy or a nonreducible/incarcerated inguinal hernia. Differentiation between benign and malignant tumors, especially sarcomas, can be difficult and only possible after histopathological examination. The main criteria for malignancy are mitotic figures, nuclear atypia and necrosis [5]. A vulvar leiomyosarcoma may be suggested if 3 of the following criteria are met: the size of 5 cm or more, infiltrative margins, 5 or more mitotic figures per 10 high power f fields, and grade 2 to 3 atypia [6]. The broad differential diagnosis of inguinal inflammation includes inguinal hernia, which is the most common diagnosis, but also tumors, cysts, abscesses, lymphadenopathy and hydrocele of the canal of Nuck, also called "Cyst of Nuck" [7].

Surgical excision is the optimal treatment that could help differentiate between leiomyoma, inguinal lymphadenopathy, hernia and malignant tumor. Preoperative imaging techniques, such as computed tomography (CT) or MRI, can be helpful but are not always performed before surgery [1,9].

Case presentation

A 44-year-old woman with a history of 1 pregnancy at term which was achieved by caesarean section (1996). Weight: 115 Kg, Height: 164 cm BMI: 42.8, without a relevant obstetrical and gynaecological history, with regular menstrual cycles and a pap smear 2022 that is negative for malignancy. Physical examination revealed an increase in volume in the left vulvoiguinal region caused by a 15x12x8 cm tumour involving the mons pubis, labia majora and part of the left inguinal canal. It was painful on palpation, but the inguinal ring was not palpable. The skin appeared shiny and thin, with no change in colour or temperature. In addition, two ultrasound scans were performed, which suggested a possible Bartholin's gland cyst. Gynaecological evaluation ruled out a Bartholin's gland cyst due to the anatomical location, and joint surgery was planned with general surgery and gynaecology with a preoperative diagnosis of a left giant Nuck cyst. A wide spindle-shaped incision was made in the region of the left labia majora to remove excess skin, dissection by planes and excision of two well-defined tumours, verification of haemostasis and closure by planes, the tumour was sent for histopathological examination. There were no trans- or post-operative complications, the patient was discharged and followed up as an outpatient, currently in good health and without gynaecological or sexual symptoms such as dyspareunia.

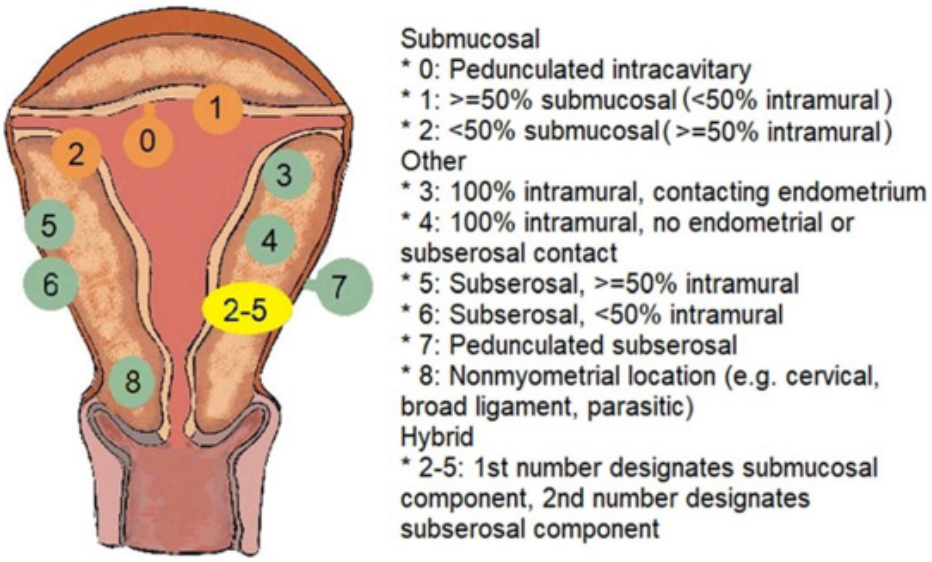

Figure 1: FIGO classification of leiomyomas.-submucosal leiomyomas include types 0, 1, and 2. Leiomyomas without a submucosal component include types 3,4,5,6, 7 and 8. All extrauterine leiomyomas are categorized as type 8. Hybrid leiomyoma is depicted as a 2-5 leiomyoma. Image Adapted and modified from Bajaj, S et al. (9)

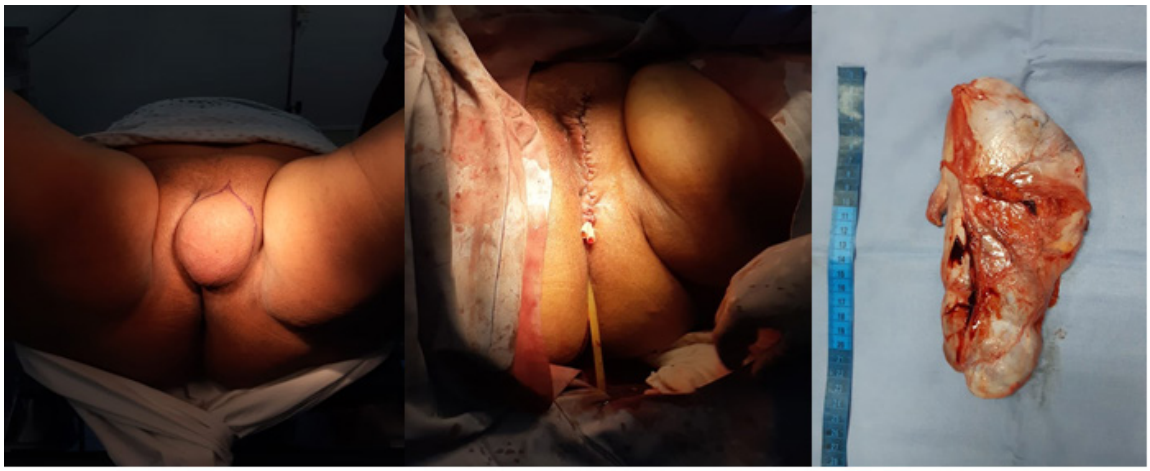

Figure 2: 2a (left) and 2b (centre): Patient before and after surgery in the operating theatre, Image 2c (right) Leiomyoma removed in one piece immediately after surgery.

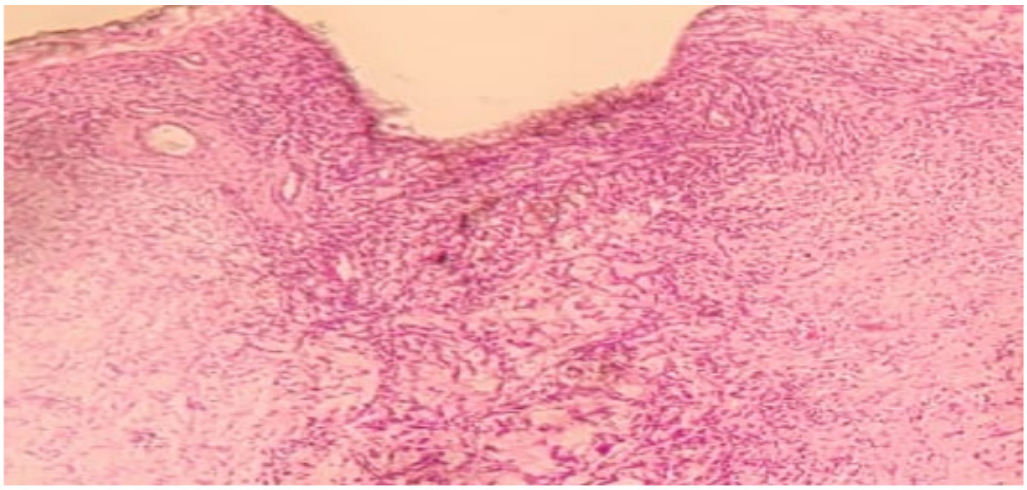

Figure 3: Mesenchymal lesion with fibers of mesenchymal bundles alternating with hypocellular areas

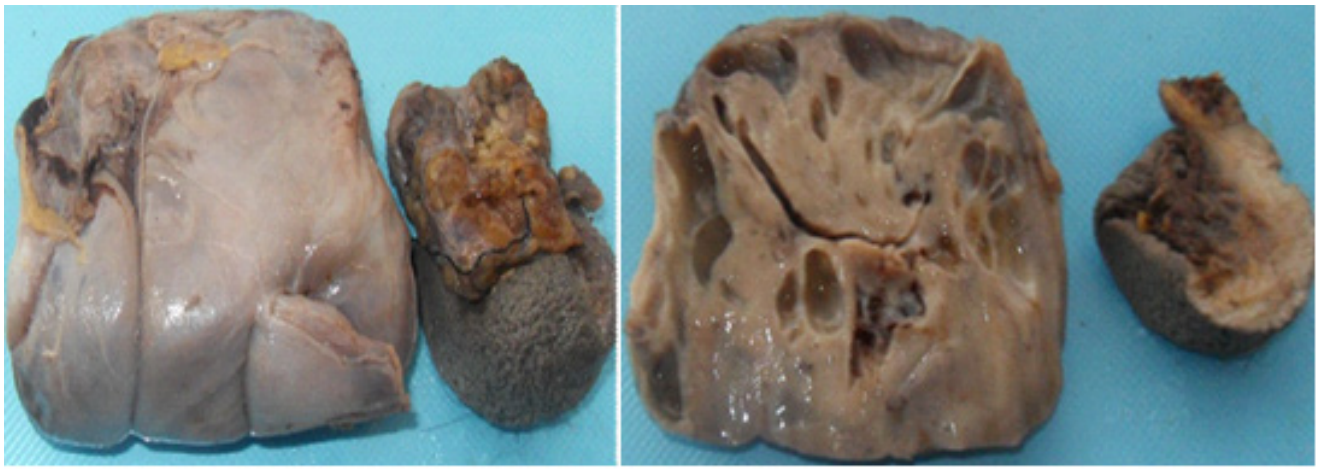

Figure 4: 4a(left) and 4b (right) show the pieces analyzed by the pathology service

Surgical Findings and histopatological diagnosis

During the intraoperative procedure, the typical morphological characteristics of leiomyomatosis became apparent and removal was achieved without trans or post-surgical complications and sent for analysis for histopathological diagnostic confirmation. A main tumour of 20x10x8 cms was extirped, which consisted of a tumour smaller than 8x6x4 cm with dark brown skin with hair, the rest of the tissue was yellow-brown with a fibro-fatty appearance and another tumour of 12x10x8 cm encapsulated and well-defined grey-brown tissue of soft consistency, on dissection it had a myxoid appearance with cystic-looking cavities and weighed 338 g. Microscopic description: Lobulated pattern of myxomatous material with elongated fusiform cells and others with stellate appearance, mononuclear inflammatory infiltrate is observed. Result negative for malignancy, concluded leiomyoma with myxoid degeneration.

Conclusion

In this particular case, a joint surgical approach was decided by general surgery and gynaecology, as the diagnostic tools were inconclusive.

Vulvar leiomyomas are rare, and although the clinical features and diagnostic aids may raise a suspicion, the definitive diagnosis is made by surgical excision and histopathological examination, as in our case.

References

1. He J, Liu W, Wu X, Li D, Liu Y (2023) A case of misdiagnosed leiomyoma of the vulva: A case report. Medicine (Baltimore). Feb 10: 102(6): e32868.
2. Witherspoon, Crystal (2022) Vulvar Leiomyoma Presenting as a Painless Vulvar Mass." Journal of minimally invasive gynecology vol. 29 2: 187-189.
3. Sun C, Zou J, Wang Q, Wang Q, Han L (2018) Review of the pathophysiology, diagnosis, and therapy of vulvar leiomyoma, a rare gynecological tumor. J Int Med Res. 46(2): 663-674.
4. Bhosale, Priya R (2008) The inguinal canal: anatomy and imaging features of common and uncommon masses." *Radiographics : a review publication of the Radiological Society of North America, Inc* vol. 283: 819-835.
5. Nielsen GP (1996) Smooth-muscle tumors of the vulva. A clinicopathological study of 25 cases and review of the literature." *The American journal of surgical pathology* vol. 20(7): 779-793.
6. Saquib S, Cherawala M, Abdel Rahman O, Keloth TE (2020) Leiomyosarcoma of the Vulva Mimicking as Chronic Bartholin Cyst: A Case Report. Oman Med J. 35(4): e153.
7. Chang Chi-Han (2021) Vulvar myoma: A case report and review of literature." Taiwanese journal of obstetrics & gynecology vol. 60(5): 924-926.
8. Owen, Carter, and Alicia Y Armstrong (2015) Clinical management of leiomyoma." Obstetrics and gynecology clinics of North America vol. 42(1): 67-85.
9. Bajaj S, Gopal N, Clingan MJ (2022) A pictorial review of ultrasonography of the FIGO classification for uterine leiomyomas. *Abdom Radiol* 47: 341–351.