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Lipoma of the vulva: A case report

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ABSTRACT

The patient, a 20-year-old nulligravida, presented with a progressive swelling on the right side of her vulva over the past three years. She also reported dull, aching pain, particularly during long walks. Upon examination, the patient appeared comfortable, and her vital signs were within normal limits. Genitourinary examination revealed a right vulvar mass, 12 cm by 7 cm, which was movable, soft in consistency, and non-tender. Subsequent inguinovulvar ultrasonography confirmed the presence of a compressible soft-tissue mass measuring 10 × 7 × 4 cm, consistent with a diagnosis of lipoma. Surgical excision resulted in a significant improvement in the patient's condition and she was discharged from hospital.

1. Introduction

Vulvar lipoma, a benign mesenchymal tumor, consists of mature fat cells dispersed within fibrous connective tissue. Typically, vulvar lipomas manifest as pliable, mobile, and painless growths in the subcutaneous tissue. Patients may not experience any discomfort initially but notice a gradually enlarging lump in the vulvar area. However, in some cases, the size of the lipoma can cause pain or aesthetic concerns. To ensure an accurate diagnosis and determine the appropriate treatment plan, it is crucial to understand the typical clinical presentation [1,2].

The etiology of vulvar lipoma remains unknown. Nevertheless, several variables may contribute to its development. These include genetic predisposition, hormone imbalances, and obesity. Research into these would benefit prevention and management [3,4].

It is important to differentiate vulvar lipomas from similar conditions such as liposarcomas or Bartholin gland cysts [5,6]. The key determinants influencing the selection of treatment options for vulvar lipoma include the size of the tumor, its location, and any associated symptoms. Among the various approaches, surgical excision is the standard choice, aiming to completely eliminate the lipoma while safeguarding the neighboring healthy tissue [4]. The case presented here involves a 20-year-old woman with vulvar lipoma.

2. Case Presentation

A 20-year-old nulligravida, whose last menstrual period occurred 3 weeks previously, presented with a progressive swelling in the right side of her vulva over the past 3 years. She experienced a dull aching pain, which worsened when walking long distances. The swelling did not increase in size with straining. She had no swelling at any other site of the body. There was no history of vaginal discharge, loss of appetite, or weight loss. Additionally, there was no personal or family history of diabetes or hypertension, and there were no similar illnesses in the family. She had no history of previous surgery and had no trauma at the site.

During the examination, the patient was comfortable, and her vital signs were within normal limits. Her conjunctiva appeared pink, and her sclera were non-icteric. Chest, abdominal, and cardiovascular findings were unremarkable. Genitourinary examination revealed a right vulvar mass, 12 cm by 7 cm, which was movable, soft in consistency, and non-tender (Fig. 1). All other examinations were unremarkable.

The patient's complete blood count and organ function tests were within the normal range. Inguinovulvar ultrasonography revealed a compressible soft-tissue mass measuring 10 × 7 × 4 cm, extending from the medial right inguinal region to the right vulvar wall. The mass exhibited a homogenous echotexture with minimal Doppler flow and a well-defined margin. A right femoral vascular Doppler scan was normal.

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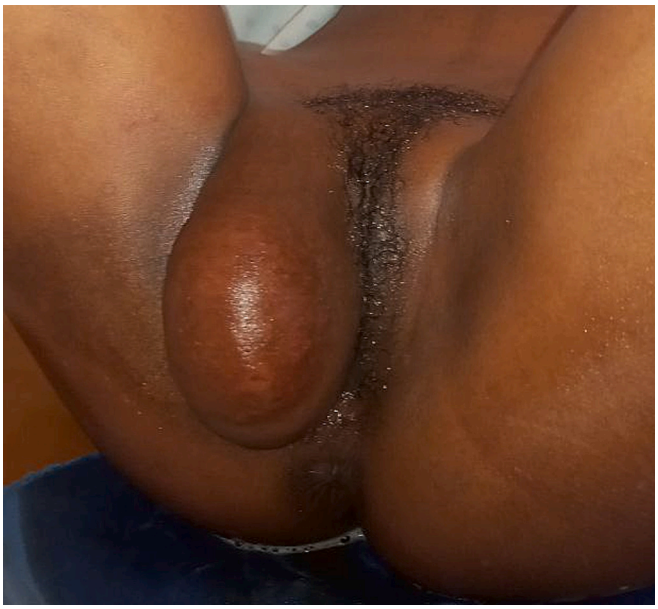

Fig. 1. The right vulvar mass.

These ultrasound findings were consistent with a diagnosis of lipoma.

As a result, the patient underwent surgery performed by a senior gynecologist and general surgeon under spinal anesthesia. The mass was successfully excised after an elliptical incision was made along the long axis of the mass (Fig. 2) and sent for histopathologic assessment. Histopathology sections showed lobules of mature adipocytes with eccentric hyperchromatic nuclei and abundant clear cytoplasm separated by thin fibrovascular septa, which confirmed the diagnosis of a lipoma (Fig. 3 and supplementary file). Postoperatively, the patient received intravenous ceftriaxone 1 g twice a day and intravenous diclofenac 50 mg twice a day for pain management, along with daily wound care. After 48 h of hospital stay, the patient was discharged with no postoperative complications. During a follow-up visit at the gynecologic referral clinic, it was noted that the wound had healed well and the scar appeared cosmetically good.

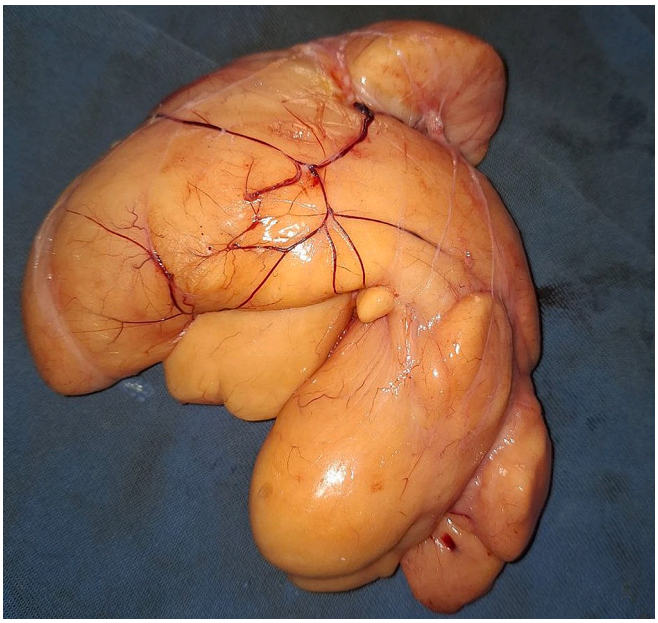

Fig. 2. Gross appearance of the mass after complete surgical excision.

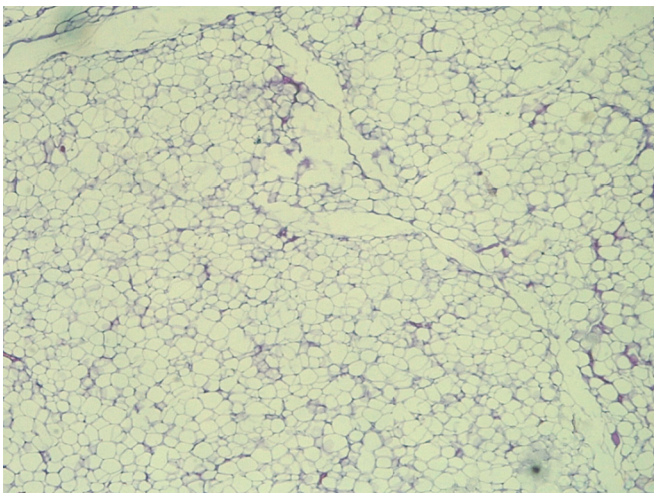

Fig. 3. Histopathologic section showing lobules of mature adipocytes with eccentric hyperchromatic nuclei and abundant clear cytoplasm separated by thin fibrovascular septa.

3. Discussion

Lipoma is a non-cancerous tumor arising from mature adipocytes (fully developed fat cells) that are surrounded by a thin, fibrous, well-defined capsule. These growths typically develop slowly and are characterized by their soft, lobulated appearance beneath the skin. Vulvar lipomas primarily originate from the fatty pads in the vulvar region, but lipomas can occur in various locations throughout the body, commonly on the upper back, neck, shoulder, belly, and proximal areas of the extremities. Lipomas are typically soft, painless, and movable, with a consistent, dough-like texture. In most cases, a clinical diagnosis can be established [1,7]. The patient in the present report had a mobile, soft, non-tender mass typical of lipoma.

Vulvar lipomas are benign mesenchymal tumors consisting of mature fat cells dispersed within fibrous connective tissue. They can be present from birth until the ninth decade of life. While the precise cause and underlying mechanisms of these tumors remain unknown, there are cases where their development has been associated with trauma [8].

Numerous disorders can present as a bulge in the groin, and distinguishing between inguinal and vulvar lesions can pose a challenge for doctors attempting to make a definitive diagnosis. Groin lesions can be categorized as neoplastic and non-neoplastic. Neoplastic lesions encompass a wide range of conditions, including lipomas, epidermoid cysts, angiomyofibroblastoma-like tumors, liposarcomas, synovial sarcomas, lymphomas, metastases from various organs or malignancies, neuroendocrine carcinomas, and cancers of the lung, breast, ovary, vulva, and colon; non-neoplastic lesions include round ligament varices, hernias, endometriosis, Kimura disease, Castleman disease, inflammation, and hematomas. It is important to differentiate between these two categories to determine the appropriate course of treatment [9].

When evaluating groin masses, ultrasonography is widely recognized as the primary imaging technique [10,11]. It is capable of distinguishing between cystic and solid lesions by comparing their echogenicity to that of the surrounding soft tissues. The echogenicity can range from hyperechoic to hypoechoic, allowing for differentiation. However, using ultrasonography alone to differentiate between lipoma and liposarcoma is extremely difficult. Additionally, the accuracy of the technique depends on the skill of the operator. Therefore, another imaging modality is necessary to provide a preliminary diagnosis of the lesion. According to one report, computed tomography (CT) can be valuable in diagnosing lipomas and ruling out other pelvic diseases. Magnetic resonance imaging (MRI) may also be useful if CT results are inconclusive, as it has a high specificity for soft tissues. In fact, several case reports identify MRI

as the preferred imaging modality [3]. This patient did not have an MRI scan because her presentation, physical findings, and ultrasound results were typical of lipoma.

Surgical excision serves as the primary therapeutic approach for vulvar lipomas. The recurrence rate is typically low and excision is considered curative. However, the decision to opt for surgical removal of the lipoma should carefully consider the patient's symptoms, the size of the lipoma, and potential complications. As with any medical procedure, it is crucial to meticulously assess the benefits and risks associated with surgery [12]. Finally, to confirm the diagnosis of vulvar lipomas, it is necessary to examine the removed tissue histopathologically, to eliminate the possibility of cancer and to shed light on the specific characteristics of the growth [13].

The patient reported here claimed she was satisfied with her care.

4. Conclusion

Vulvar lipomas are relatively uncommon; they are noncancerous growths made up of adipose tissue that develop in the vulvar region. Although typically harmless and asymptomatic, they can occasionally lead to discomfort or aesthetic issues due to their size or location. The surgical removal of vulvar lipomas is generally a straightforward procedure and can effectively address both symptoms and cosmetic concerns.

Contributors

Nigat Amsalu Addis was involved in the management of the patient, wrote the original draft, and contributed to the submission and revision of the figures.

Getachew Shiferaw Yigzaw contributed to the conception of the case report and patient care, and drafted the manuscript.

Sentaye Teka Belay contributed to patient care and the literature review, and revised the article critically for important intellectual content.

Yilkal Ademe Belay contributed to patient care and the literature review, and revised the article critically for important intellectual content.

Ephrem Awoke Shiferaw contributed to patient care and the literature review, and revised the article critically for important intellectual content.

Hirut Tesfahun Alemu contributed to the literature review and critically revised the paper.

Yohannis Derbew Molla contributed to the literature review, and critically revised the paper.

All authors read and approved the final version.

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Patient consent

Written informed consent was obtained from the patient for publication of the case report and accompanying images.

Provenance and peer review

This article was not commissioned and was peer reviewed.

Conflict of interest statement

The authors declare that they have no conflict of interest regarding the publication of this case report.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.crwh.2024.e00588.

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