



Vulvar lipoma: A case report and brief literature review

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ABSTRACT

The present study is a case report of vulvar lipoma and review of the available literature. Lipoma is the most common soft-tissue tumor of mesenchymal origin; nevertheless, it is rarely found in the vulva. To the best of the authors' knowledge, the medical literature has been limited to a few case reports and very small case series, in totally about 100 cases being published. A 36-year-old patient presented with a painless, slow-growing, mobile mass in the left labia majora. The ultrasound imaging revealed the presence of lipoma. Surgical excision was performed with the histopathological examination of the excised mass, that confirmed a lipoma.

Keywords: Benign tumor; lipoma; vulvar neoplasms

INTRODUCTION

Lipomas are the most common benign, slow-growing soft tissue tumors composed of mature adipocytes encapsulated in a thin, fibrous, well-circumscribed capsule.¹ Their prevalence is about 1% of the population.^{2,3} These mesenchymal neoplasms are observed anywhere in the human body, but are most frequently detected in the upper part of the back, neck, shoulder, abdomen and proximal portions of the extremities.^{1,4-6} We present a rare case of vulvar lipoma with review of the worldwide case literature.

CASE REPORT

The 36-year-old patient was admitted to the hospital due to the presence of a painless, soft, mobile mass on palpation in

the vulvar region on the left side. The gynecological history was unremarkable: Menarche occurred at the age of 12 years, subsequent menses were regular, with no family history, no history of vulvar trauma, and no changes in laboratory tests, that could serve as a reference point. The patient reported that the mass had steadily increased in size over the past year. Physical/gynecological examination revealed a 4.0×10.0 cm mass in the left labia majora (Figure 1), soft, painless, non-fluctuant to palpation, irreducible-cough impulse test being negative, no regional inguinal lymph nodes enlargement. The skin overlying this tumor without pathological changes. Ultrasound imaging showed a well-defined, hypodense, homogeneous mass 92.6×37.2 mm in the left labia majora (Figure 2). Surgical excision of the tumor was performed under epidural anesthesia

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(Figure 3) and presented no technical difficulties. A histological examination revealed a circumscribed benign tumor composed of mature adipocytes, confirming the diagnosis of vulvar lipoma (Figure 4). The postoperative period was uneventful; the patient was satisfied with the cosmetic result. There have been no signs of recurrence 19 months later.

DISCUSSION

Vulvar lipomas are considered rare benign mesenchymal tumors, formed by mature adipose cells, with uncertain etiopathogenesis.³ The study of bibliographic sources from online databases Google Scholar and PubMed after the following keywords: “Vulvar lipoma”, “vulvar neoplasm” highlighted that, vulvar lipomas are very rare conditions; respectively, by now, the

specialized literature has been limited to a few case reports^{2,4,5,7-12} and very small case series¹³⁻¹⁵, in totally, about 100 cases have been published.⁸

The exact etiology of vulvar lipomas remains uncertain. Trauma (including chronic minor), obesity and genetic abnormalities are some of the reported risk factors, involved in the development of lipomas.²⁻⁵ According to data from the specialized literature, chronic intermittent irritation of the soft tissues in the vulva region is one of the possible causes, however, congenital lipomas undermine this speculation.⁴ According to cytogenetic research, breakpoints on chromosome 12q and other forms of involvement of the chromosomal region 12q13-q14, have been identified in benign lipogenic tumors.⁴ As a rule, lipomas are



Figure 1. Preoperative presentation of the left labia majora mass

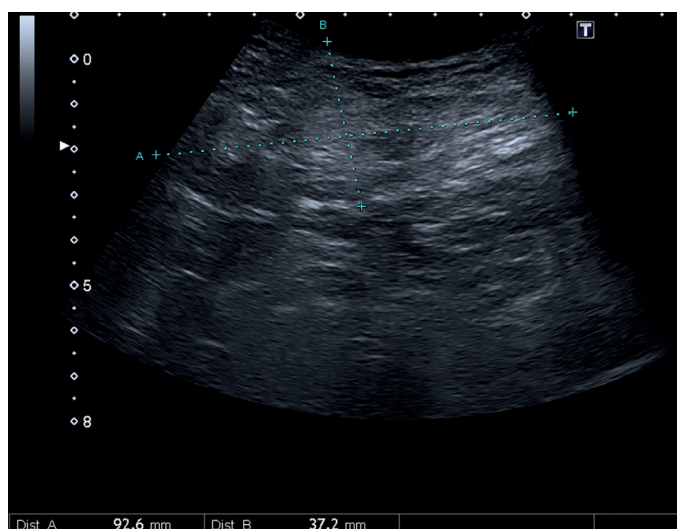


Figure 2. Ultrasound examination showing the well-defined, hypodense, homogeneous mass 92.6×37.2 mm in the left labia majora

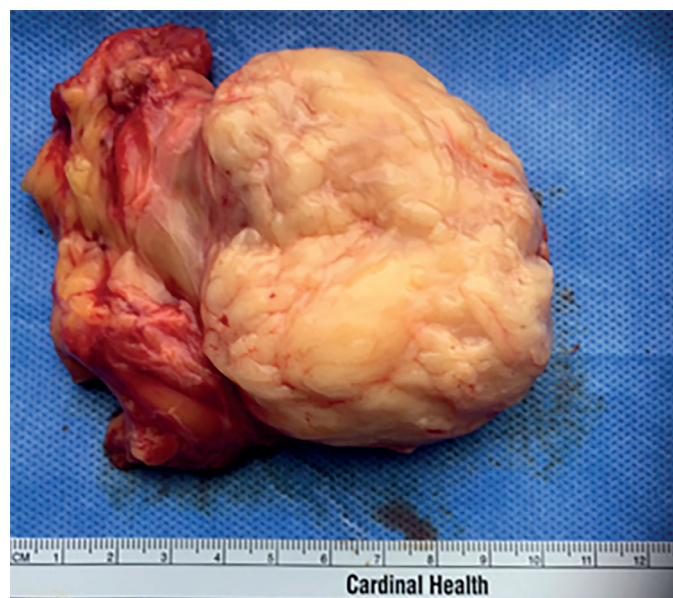


Figure 3. Excised specimen: Macroscopic appearance of lipoma

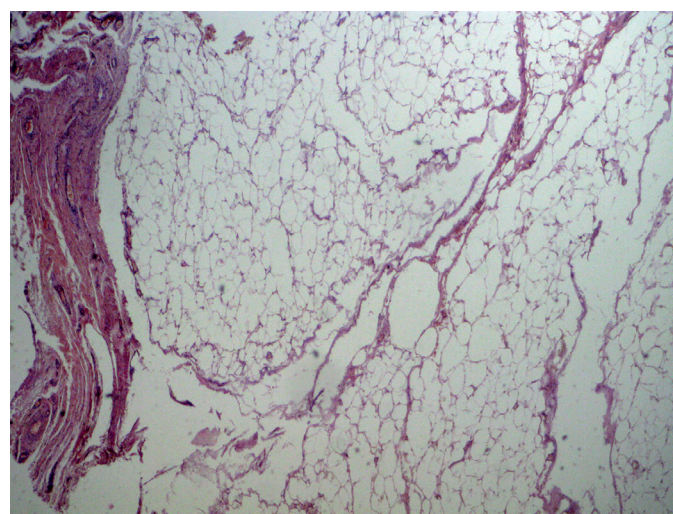


Figure 4. Histopathological specimen showing mature adipocytes with part of their capsule on coloration H&E ×25
H&E: Haematoxylin & eosin

observed between the fourth and sixth decades of life, but they are described in all age groups.^{1,3-5}

Vulvar lipomas are characterized by clinically benign evolution, marked by a single or multiple mass, painless, soft, slow growth, mobile, with uniform consistency on palpation.^{1,3,4,13,15} Most authors mention vulvar lipomas on the right side,^{1,3-5,7,8,13,14} nevertheless, they are also reported on the left side^{9,10,13} or bilaterally.¹¹ Although, primarily described as being a few centimeters in size, vulvar lipomas can be very large^{1,3,4,15}, thus, Ramírez-Macías et al.¹² described the vulvar lipoma of 51 cm. Therefore, they can be diagnosed in some cases only on the basis of clinical examination, without imaging methods.^{3,15} The most common pathologies involved in the clinical differential diagnosis of vulvar lipomas are: Bartholin gland cyst, Nuck duct cyst or liposarcomas^{3-5,10}.

Current imaging methods such as ultrasonography, computed tomography and magnetic resonance imaging can provide an accurate diagnosis, even for small mass.^{1,3,8,10,15} The use of these imaging techniques provides useful tools to detect the lipomatous consistency of vulvar mass, to appreciate the tumor extensions and the relationship with adjacent anatomical structures, as well as, to differentiate from other masses of the vulvar regions^{4,6,9,10,15}. The ultrasound examination is considered to be the first imaging method, which should be used for the diagnosis of tumor mass in the vulvar region, with the identification of lipomas as non-specific homogeneous echogenic structures with lobular features involving fat accumulation.^{3,15} Computed tomography and magnetic resonance imaging are useful in differentiating lipomas from liposarcomas or other pathologies.^{3-5,8,10} Computed tomography imaging reveals vulvar lipoma as a homogeneous, round or oval, hypodense, well-circumscribed mass with a density between -50 and -100 Hounsfield units, which is the pathognomonic sign for the diagnosis of these tumors.^{3,15} Magnetic resonance imaging visualizes lipomas as tumors containing adipose tissue, with high signal intensity on T1W and medium (intermediate) intensity on T2W images, and a decrease in signal with fat suppression.³ Thus, T2-weighted image signal intensity greater than that of fat is known to detect myxoid degeneration, neoplastic process or necrosis.¹

The definitive diagnosis is confirmed by histopathological analysis.³ Macroscopically, lipomas are detected as round or oval tumors with a smooth, lobulated surface with a yellow color on section.^{1,3} To exclude the possibility of malignancy, the histological examination is mandatory.^{3,4} Morphologically, lipomas stand out as tumors represented by mature fat cells (adipocytes) with thin fibrovascular connective tissue septa, surrounded by a fibrous capsule.⁴

Due to the rarity of vulvar lipomas, the optimal treatment is currently uncertain and controversial, including both: Minimally invasive approaches, such as liposuction, laser, ultrasound, or injection of pharmaceutical agents, as well as, open surgery used to remove these neoplasms.⁸ Reported treatment varies significantly, depending on clinical features, lipoma size and possible complications, which must be carefully considered. However, complete surgical excision with capsule removal, to prevent recurrence, remains the treatment of choice for vulvar lipomas, because it allows effective resolution of both: Symptoms and cosmetic concerns.^{1,3,5,8,9,15} According to the specialized literature data, the statistics of vulvar lipoma malignancy are not reported.^{4,5,9} The prognosis for the treatment of vulvar lipomas is favorable, according to research, no case of recurrence of this disease after surgical intervention has been published after the monitoring period of up to 24 months.^{1,9}

CONCLUSION

Vulvar lipomas are rare benign mesenchymal tumors, formed from mature fat cells. Ultrasound and magnetic resonance imaging are the essential diagnostic techniques. However, the definitive diagnosis is confirmed by histological examination, which can be crucial for achieving better results. Surgical excision is the treatment of choice in special for symptomatic patients.

ETHICS

Informed Consent: Written informed consent was obtained from the patient for publication of the present study.

FOOTNOTES

Contributions

Surgical and Medical Practices: A.M., V.P., E.S., I.M., Concept: A.M., V.P., E.S., I.M., Design: A.M., V.P., E.S., I.M., Data Collection or Processing: A.M., V.P., E.S., I.M., Analysis or Interpretation: A.M., V.P., E.S., I.M., Literature Search: A.M., V.P., E.S., I.M., Writing: A.M., V.P., E.S., I.M.

DISCLOSURES

Conflict of Interest: No conflict of interest was declared by the authors.

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