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Case Report

Vulvar leiomyoma in a postmenopausal woman mimicking common labial swelling: a rare case report

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ABSTRACT

Vulvar leiomyoma is a rare benign smooth muscle tumor that accounts for a very small proportion of gynecological and vulvar neoplasms and is often misdiagnosed as more common vulvar swellings such as Bartholin gland cysts. We report a case of a 58-year-old multiparous postmenopausal woman who presented with a painless, slow-growing vulvar mass of 10 years' duration. Clinical examination revealed a well-circumscribed, firm, non-tender mass involving the right labia majora. The patient underwent complete surgical excision of the lesion. Histopathological examination confirmed the diagnosis of vulvar leiomyoma. The postoperative course was uneventful, with no evidence of recurrence on follow-up. This case highlights the importance of considering vulvar leiomyoma in the differential diagnosis of long-standing labial swellings, particularly in peri- and postmenopausal women. Complete surgical excision remains the treatment of choice and provides both definitive diagnosis and excellent prognosis.

Keywords: Atypical leiomyoma, Benign vulvar tumors, Labial, Vulvar, Post-menopausal, Leiomyomas

INTRODUCTION

Vulvar swellings encompass a wide spectrum of benign and malignant conditions and often pose a diagnostic challenge due to their rarity and overlapping clinical features. Vulvar leiomyoma is an uncommon benign smooth muscle tumor and is frequently misdiagnosed as more common entities such as Bartholin gland cysts or epidermal inclusion cysts. Vulvar leiomyomas account for approximately 0.03% of all gynecological tumors and about 0.07% of all vulvar tumors, with fewer than 300 cases reported in the literature.¹⁻⁵ Definitive diagnosis requires complete surgical excision and histopathological confirmation.

CASE REPORT

A 58-year-old multiparous postmenopausal woman presented with a painless vulvar swelling of 10 years'

duration, associated with intermittent mild discomfort. The swelling was gradually progressive and non-reducible. On local examination, a well-circumscribed, smooth, firm, non-tender mass measuring approximately 4×5 cm was noted over the right labia majora. The overlying skin was healthy, and there was no extension to adjacent structures. General physical and gynecological examinations were unremarkable. Routine laboratory investigations were within normal limits. Based on clinical examination, differential diagnoses of lipoma and leiomyoma were considered.

Management and outcome

The patient underwent complete surgical excision of the labial mass under spinal anesthesia. The lesion was enucleated in toto with an intact capsule. The postoperative period was uneventful.

Gross examination of the cut section revealed a well-encapsulated solid mass. Histopathological examination confirmed the diagnosis of vulvar leiomyoma. No recurrence was noted during follow-up.



Figure 1: Clinical finding of lump on examination.



Figure 2: Cut section of specimen.



Figure 3: Gross picture of specimen after removal.

DISCUSSION

Leiomyomas of the vulva are exceedingly rare benign smooth muscle tumors, accounting for less than 0.03% of all gynecological neoplasms, with fewer than 300 cases reported in the literature.¹⁻⁴ These tumors may arise from smooth muscle elements of the round ligament, erectile tissue, blood vessel walls, or the dartos muscle of the labia majora.^{1,2}

Clinically, vulvar leiomyomas usually present as slow-growing, painless labial masses and are commonly misdiagnosed as Bartholin gland cysts, lipomas, or epidermal inclusion cysts due to their nonspecific presentation.^{1,2} Most reported cases occur in women of reproductive age; however, cases in peri- and postmenopausal women have also been described, emphasizing that age alone should not exclude this diagnosis.^{1,3}

Long-standing duration, firm consistency, non-fluctuant nature, and absence of inflammatory signs may suggest a solid tumor rather than a cystic lesion. Definitive diagnosis is established only after surgical excision and histopathological examination, which typically reveals interlacing bundles of spindle-shaped smooth muscle cells without atypia or significant mitotic activity.^{3,5}

Complete surgical excision with an intact capsule remains the treatment of choice and is associated with excellent prognosis and minimal risk of recurrence.^{1,4} Awareness of this rare clinical entity is essential for gynecologists to ensure appropriate surgical management and exclusion of malignancy.

CONCLUSION

Vulvar leiomyoma is a rare, benign vulvar tumor that can clinically mimic common labial cysts, particularly when long-standing and asymptomatic. Complete surgical excision with intact removal remains the treatment of choice, providing definitive diagnosis and excluding malignancy. Awareness of this rare entity is essential, especially in peri- and postmenopausal women.

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