

Case report

A rare case of vulvar leiomyoma masquerading as Bartholin cyst

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ABSTRACT

Vulvar leiomyoma possesses a diagnostic challenge clinically due to its rarity. Usually, it is diagnosed as Bartholin cyst in clinical practice, until histopathological examination is done. Herein we report a 49-year female with a painless perineal swelling on the right side of the vulva for 5 months. Clinically, it was suspected as Bartholin gland cyst based on her anatomical location, clinical signs, and symptoms. Excision was done and histopathological study revealed a benign smooth muscle neoplasm with whorls and interlacing fascicles of spindle shaped cells without nuclear atypia. Hence diagnosed as vulvar leiomyoma histopathologically.

Keywords: Vulva; vulvar leiomyoma; Bartholin cyst.

INTRODUCTION

Leiomyoma, a benign smooth muscle neoplasm of mesenchyme origin commonly occurs in the uterus (1). It was initially termed as 'myoma' by Rudolf Virchow in 1854 (2). Leiomyomas possess a greater diagnostic challenge clinically when occurring in an extrauterine location. Vulvar Leiomyoma are rare (1) and it prevails 0.07% of all vulvar neoplasms (3). So far not more than 160 cases of vulvar leiomyoma have been recorded in the literature (4). The risk factors for its occurrence are not well articulated, and it has been postulated that estrogen and progesterone play a role in tumor proliferation (5). Before menarche occurrence of leiomyoma are rare and after menopause, they often undergo regression (6). Histologically, they originate from the smooth muscles of the erectile tissues, walls of blood vessels, and from the round ligament (2). Herein, we report an unusual case of vulvar leiomyoma masquerading clinically as a Bartholin cyst.

Case history

This case report presents a 49-year-old woman with a history of painless swelling on the right side of the vulva over a period of 5 months. The swelling had gradually increased in size over the period which was associated with discomfort during walking and sitting. Her past medical and surgical histories were unremarkable. Local examination revealed a round to oval circumscribed mass of size 6 x 5 cm, at the posterior aspect of right labium majus between clitoris and posterior commissure of labium minora. Swelling was non tender and relatively mobile. A preoperative diagnosis of Bartholin's cyst was made, and excision of the mass done. The specimen was sent for histopathological examination.

Histopathological examination

The specimen we received was fixed in a 10% buffered formalin solution. Gross examination showed a grey, soft white tissue mass measuring 5 x 4 x 2.5 cm and external surface was irregular (Fig. 1). Cut surface shows a homogenous gray tan firm mass (Fig. 2).

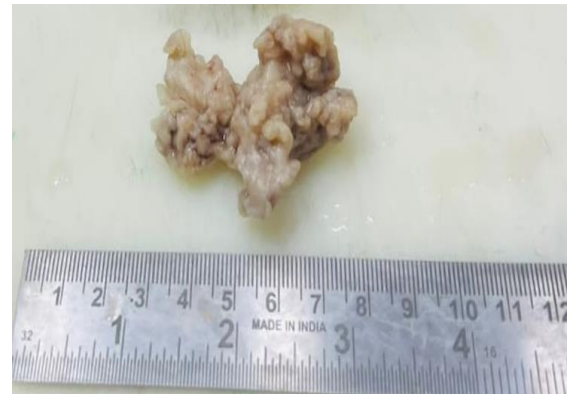


Fig. 1: Gross picture of vulvar mass

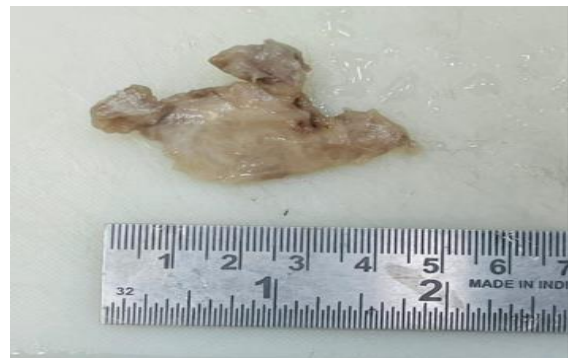


Fig. 2: Cut surface shows homogenous grey tan mass

Microscopy showed whorls and interlacing fascicles of spindled smooth muscle cells exhibiting no nuclear atypia admixed with areas of few congested and dilated blood vessels (Fig. 3-5). Histopathologically it was diagnosed as vulvar leiomyoma. No necrosis. No mitosis.

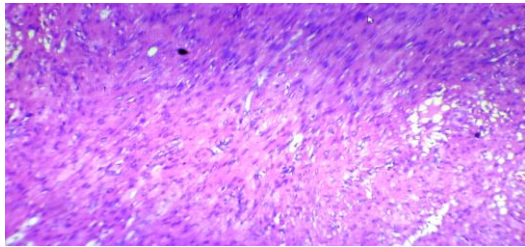


Fig. 3: H & E stain 10 X-interlacing fascicles of spindled smooth-muscle cells

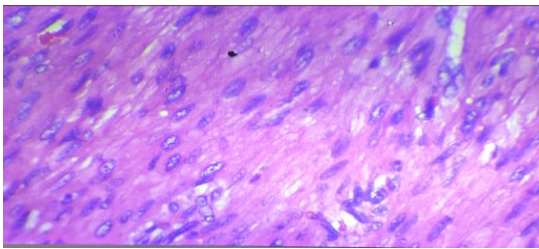


Fig. 4: H & E 40 X magnification shows spindled cells without nuclear atypia

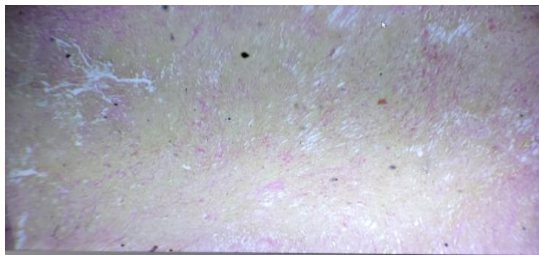


Fig. 5: van Gieson stain –stains smooth muscle yellow

DISCUSSION

Vulvar myoma is a rare yet benign tumor. Vulvar leiomyoma is frequently diagnosed as Bartholin's abscess or cyst (7) preoperatively due to its anatomical location, clinical signs and being common. Transperineal ultrasonography, magnetic resonance imaging is of help in establishing the diagnosis in complicated swellings, but histopathological confirmation is mandatory.

In a study by Nielson *et al.*, (8), 25 patients in their series are preoperatively diagnosed as Bartholin's cyst. They presented with a painless mass and other symptoms being itching, and erythema. Histological diagnosis revealed, 20 were leiomyoma of which 4 were atypical and 5 were leiomyosarcoma. In all these cases, the smooth muscle cells are mostly in fascicular arrangement or in whorls. Large sized and infiltrating margins represent an increased risk for recurrence and possibility to be malignant. Following criteria have been postulated to categorize whether it is a usual leiomyoma or an atypical leiomyoma or leiomyosarcoma. The features are (i) 5 cm in diameter or larger; (ii) 5 or more than 5 mitoses per 10 HPFs; (iii) an infiltrative margin; (iv) moderate to severe nuclear atypia. If any three or more features are seen, it is diagnosed as leiomyosarcoma (3,9). If only two criteria are there, atypical leiomyoma is warranted, and if less than two features are noted, it is a usual leiomyoma (3). Nucci and Fletcher (10) has also stated

that presence of coagulative necrosis along with these features are noted they are more in favor of leiomyosarcoma. In this current case, the tumor is composed of spindled smooth muscle cells in interlacing fascicular arrangement with no cytological atypia and no coagulative necrosis with 0-1/HPF mitosis.

Hence vulvar mass should not be misinterpreted as non-neoplastic (11) until histopathological study was done. Surgical excision with clear margin is primary treatment for vulvar myoma.

CONCLUSION

We present an unusual vulval swelling which masqueraded clinically as a Bartholin's cyst. Various imaging techniques can aid in the diagnosis of vulvar leiomyoma; however, the final diagnosis is always a histopathological one which helps to perform an effective surgery with clear margins and long term follow up to avoid recurrences.

CONFLICT OF INTEREST

Authors declare no conflicts of interest.

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