Glomus Tumor Excision With Clitoral Preservation

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Although the differential diagnosis of clitoral masses is extensive, clitoral tumors are rare. Glomus tumors are also exceedingly rare but have been reported in different locations in the genitourinary region.[1–4] In the current case, we describe the rare presentation of a clitoral glomus tumor.

CASE REPORT

A 41-year-old premenopausal woman was referred to our outpatient clinic for evaluation of a vulvar mass. The patient noted a vulvar lump 11 weeks before presentation followed by a gradual, subtle increase in size and intermittent, sharp, needle-like pain radiating to the left buttock. Treatment with warm compresses and sitz baths was recommended by the patient's referring provider, before presenting to our clinic, but the patient found it difficult to tolerate heat to the genital region. The patient gave a negative history of hair removal, genital trauma, infections, new sexual partners, recent travel, dyspareunia, or history of similar lesions. Organ system review was significant for nocturia twice per night.

Medical history was notable for 2 spontaneous vaginal deliveries, a history of a benign endometrial polyp and menorrhagia. Her recent cervical and breast cancer screens were both unremarkable. She was employed as a receptionist and denied work-related exposure to skin irritants. Family history was positive for breast cancer in patient's mother.

Physical examination revealed a healthy woman who appeared her stated age with normal female adult hair pattern, no signs of acne, an elevated blood pressure, and body mass index of 30 kg/m^2.

Genitourinary examination was notable for a 1-cm firm, mobile, tender mass adjacent to the glans clitoris, without involvement of the clitoral hood. There were no visible skin lesions or ulcerations and no lymphadenopathy (see Figure 1).

Magnetic resonance imaging of the pelvis with and without gadolinium was obtained. An asymmetric ovoid T2 hyperdense mass with a T2 hypointense rim was identified at the base of the clitoris measuring 1.5 cm anteroposteriorly in largest dimension. The mass demonstrated prompt diffuse enhancement and retention of contrast. There was no evidence of local invasion into the labia; however, the posterior margin appeared poorly circumscribed. These findings could not rule out the possibility of malignancy.

Given the patient's discomfort, failure to respond to conservative management, and the potential for malignancy, the decision was made to proceed with surgical excision. Examination under anesthesia was consistent with clinic findings. The mass was identified by palpation and retracted laterally. An incision was made in the left lateral fold of the clitoris medial to the pudendal cleft. Using sharp and blunt dissection, the capsule was identified and separated from the surrounding tissue. The remaining posterior aspect of the mass was attached by a vascular stalk. The stalk transected only after ensuring complete removal of tissue associated with the mass. The mass was excised completely and intact with minimal blood loss. Inspection revealed a white, firm, fibrous ovoid structure of rubbery consistency. Frozen section was inconclusive. The overlying tissue was approximated and closed using multiple layers of absorbable suture. The patient had resolution of tenderness and pain within 2 weeks.

Histology demonstrated a nodular, highly vascular lesion composed of plump cells with a moderate amount of cytoplasm, indistinct cell borders, and minimal cytologic atypia (see Figure 2). Up to 6 mitotic figures were identified per 50 high-powered fields. Immunohistochemistry for smooth muscle actin was positive. CD34 and ERG stains highlighted background but were negative in the lesion. Glut-1, desmin, and S-100 were negative. Final diagnosis was a glomus.[5] Please see supplemental figures 1 and 2 (Figure, Supplemental Digital Content 1,

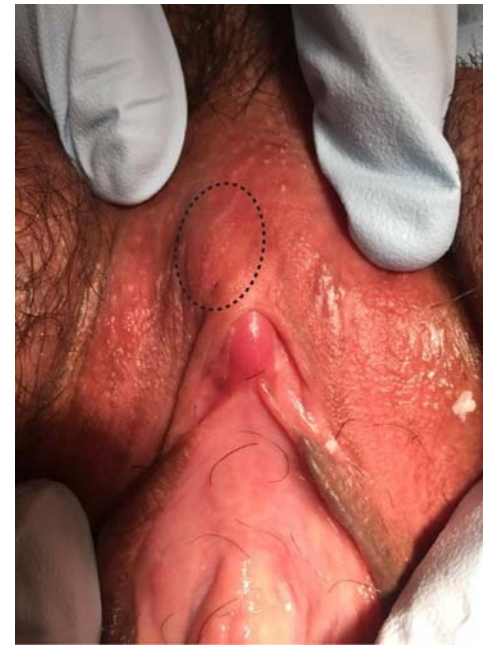

FIGURE 1. Clinic photograph of mass before surgery. A firm, mobile, tender mass (circled) displaced to the right of the glans clitoris.

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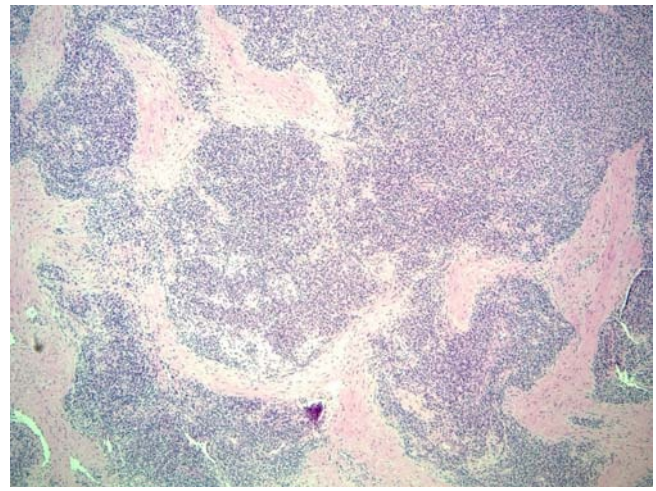

FIGURE 2. Hematoxylin and eosin stain of tumor. Highly vascular lesion composed of plump cells within a moderate amount of cytoplasm, indistinct cell borders, and minimal cytologic atypia.

http://links.lww.com/LGT/A31; Figure, Supplemental Digital content 2, http://links.lww.com/LGT/A32).

DISCUSSION

Glomus tumors are neuromyoarterial masses arising from the glomus body, a complex consisting of an anastomosis between an afferent arteriole and an efferent venule that contributes to temperature sensitivity.[6] They can be distributed throughout the body; however, they are predominantly found in the subungual region and are often associated with discomfort with temperature change. This sensitivity to temperature change was noted by our patient when she attempted warm compress application to the area. The diagnosis is made by tissue sampling and histology, which reveals positive staining for vimentin, smooth muscle actin, calponin, and desmin.[5] Recently, a correlation between neurofibromatosis and glomus tumors has been described; however, this patient has no stigmata or family history of this disease.[7]

Excisions of clitoral masses present challenges. Careful consideration of bleeding risk and sexual function must be included in counseling. The use of an eccentric, semilunar incision lateral to the clitoral hood allows for access to the mass while avoiding the innervation and blood supply to the clitoris, in the authors' experience.

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