Relato de Caso

Vaginal schwannoma: report of a rare clinical case

Schwannoma vaginal: a propósito de um caso clínico raro

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ABSTRACT

Schwannomas of the female genital tract are extremely uncommon. They are usually benign, and simple excision is the adequate treatment. The case of a 57-year-old woman with a cellular schwannoma of the vagina is described, in addition to a summarized literature review of schwannomas in the female genital tract. Complete excision was performed, and the histological report confirmed to be a vaginal Schwannoma. Due to its possibility to occur, even if in a very low incidence scenario, Schwannomas should not be excluded from the differential diagnosis of a vaginal mass.

Keywords: Schwannomas. Tumors. Peripheral Nerves.

RESUMO

Schwannomas do trato genital feminino são extremamente raros. São tumores geralmente benignos e a excisão simples é o tratamento adequado. Neste artigo descreve-se o caso de uma mulher de 57 anos com Schwannoma vaginal, além de uma revisão resumida da literatura sobre schwannomas no trato genital feminino. A excisão completa foi realizada e o estudo histológico confirmou o diagnóstico de Schwannoma vaginal. Devido à sua possibilidade de ocorrer, mesmo num cenário de incidência muito baixa, os Schwannomas não devem ser excluídos do diagnóstico diferencial de massas vaginais.

Palavras-chave: Schwannomas. Tumores. Nervos Periféricos.

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INTRODUCTION

Schwannomas are frequent benign lesions, occurring most often in the fourth and fifth decades with an equal sex incidence.[1]

It is a benign tumor that arises from the Schwann cells of peripheral, cranial, or autonomic nerves. The most common locations are the head, neck, upper, and lower extremities, posterior mediastinum, and retroperitoneum.[2] There are few reports of schwannoma involving the vagina.

The tumor does not destroy or affect the nerve because of its peripheral location. It is a tumor that grows slowly, and its early detection is difficult.[3] They are well circumscribed and do not infiltrate or metastasize.[4]

The diagnosis of this type of tumor is based on pathological examination revealing the classic schwannoma Antoni A and B areas. Antoni A areas are hypercellular, composed of spindle tumor cells (elongated Schwann cells) organized in sheets, showing a fascicular pattern and nuclear palisading arranged around a collagenous hyalinised core (Verocay bodies). Antoni B areas are hypocellular and composed of small round cells within a myxoid stroma.[5]

Immunohistochemical analysis is essential to confirm the diagnosis of schwannoma and to differentiate these tumors from the homologous ones.

Schwannomas are composed predominantly of Schwann cells, which are characterized immunohistochemically by positive S-100 protein immunoreactivity in the majority of tumor cells.[5]

Usually, they present as a single painless subcutaneous mass of variable size (exceptionally very large), but may be occasionally multiple and, in this context, rarely associated with von Recklinghausen's neurofibromatosis.[6] The clinical manifestations of schwannomas vary according to tumor size and location and are mostly atypical.[5]

Schwannomas uncommonly recur and rarely suffer malignant change. Treatment in the form of excision is accepted to be curative.[5]

We report a case of vaginal schwannoma arising from the right lateral vaginal wall.

CASE REPORT

A 57-year-old post menopause female, gravida 2 para 2, presented with a history of post-coital bleeding over the previous 12 months. The patient had no significant family history of cancer or hereditary disease.

Gynecological examination revealed a nodular tumor located in the right lateral vaginal wall. The size of the mass was approximately 6x6 cm, and it was fixed, with a hard texture, clear boundary, smooth surface, and regular shape. Cervix, uterus, and respective adnexal areas did not show any signs of an invasion. Routine blood investigations, including tumor markers, were normal. Pelvic ultrasound was unremarkable.

Pelvic MRI revealed a 6.5x6.5x6 cm mass on the right lateral wall of the vagina, located on the right side of the anus elevator muscle. It showed one central area with 4x4x2.5 cm with liquid-liquid level, presenting signal T1 and T2 characteristics, suggesting hematic content. The lesion had well-defined contours, with no suggestive signs of invasion of the surrounding structures.

The patient underwent exploratory surgery through a transvaginal approach and under general anesthesia. The lesion was indeed located in the right lateral wall of the vagina, appeared to be nodular and measured about 7 cm of maximum length. The mass had a clear cleavage plain from the surrounding tissues, its surface was smooth, with regular surface and encapsulated. (Figure 1).

Microscopic examination showed a fusocellular lesion involved by a thin fibrous capsule constituted by short spindle cells, without nuclear atypia and very rare mitosis figures. Areas of higher cellularity and lower cellularity were observed. Presence of focal nuclear palisade was observed.

Immunohistochemically, tumor cells exhibited a positive reaction with S-100 protein (Figure 3.A). The tumor cells were also vimentin (+), desmin (−), and smooth muscle α-actin (SMA) (−).

The patient had a fast and complete recovery following complete margin-negative surgical resection, and there has been no evidence of recurrence or metastasis in the follow-up (last follow-up visit was 12 months after surgery).

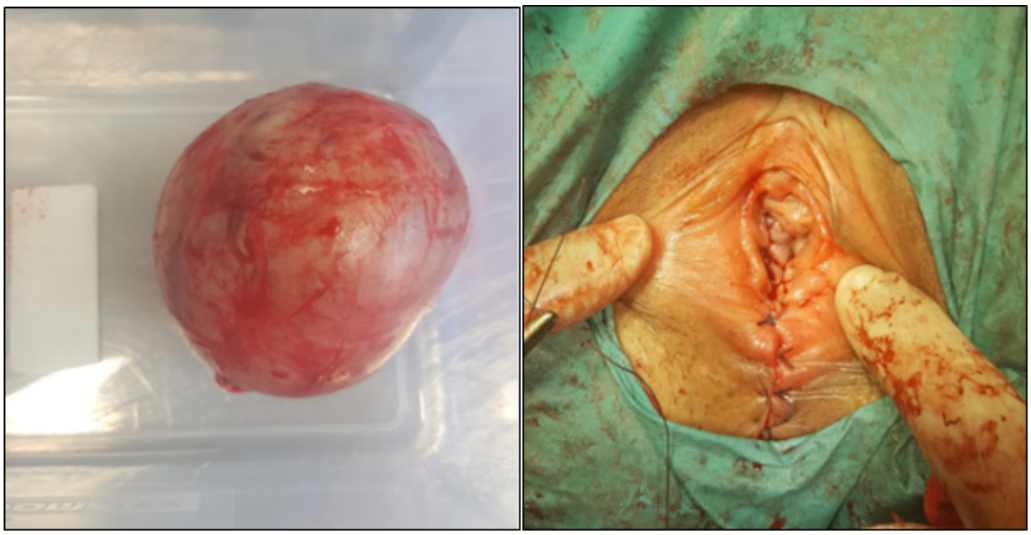

Figure 1: Gross pathological specimen of vaginal mass excision; **Figure 2:** Picture of perineum after surgery
Fonte: Department of Obstetrics and Gynecology, Centro Hospitalar Tondela Viseu.

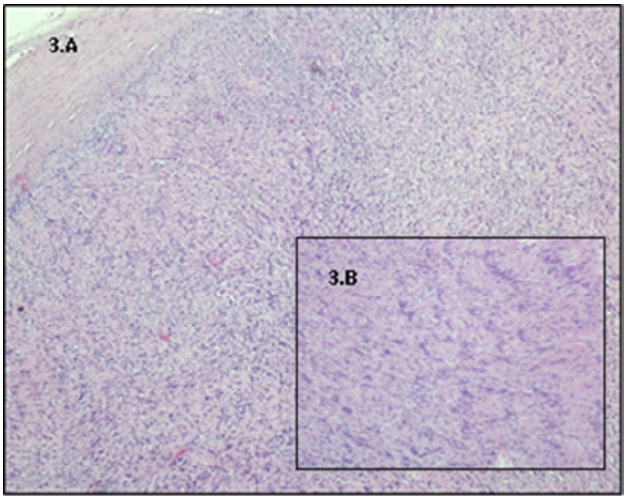

Figure 3: A. Hematoxylin-eosin, 4x; **Figure 3:** B. Hematoxylin-eosin, 10x
Fonte: Department of Pathological Anatomy, Centro Hospitalar Tondela Viseu.

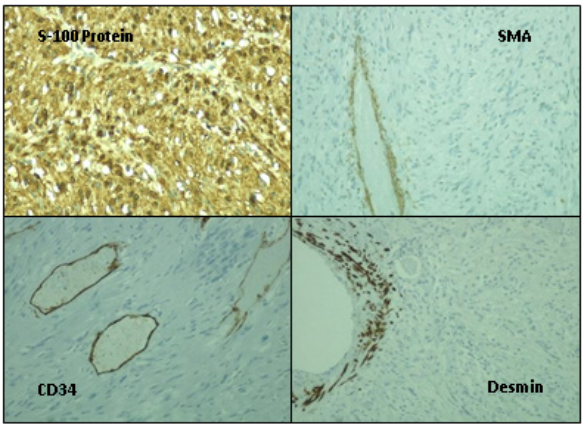

Figure. 4: Immunohistochemistry: tumor cells are positive for S-100 protein, confirming their nerve sheath origin. They are negative for SMA (smooth muscle α-actin), CD34 and desmin
Fonte: Department of Pathological Anatomy, Centro Hospitalar Tondela Viseu.

DISCUSSION

Schwannomas of the female genital tract are sporadic.

These tumors are most frequently benign lesions and appear generally on the limbs (frequently the upper limbs), followed by the head and neck (including the oral cavity, orbit, and salivary glands)[1].

The differential diagnosis of a mass in the vagina also includes schwannomas.

According to the size and location of the tumor, genitourinary schwannomas may present with vaginal bleeding, discomfort, discharge, or can simply be asymptomatic.[4] For vaginal schwannomas, early detection can be challenging due to the typically slow growth and the non-specific clinical manifestations.

In the present case, the patient was 57 years old and presented with a 6 cm solitary tumor in the right lateral vaginal wall. She presented with a complaint of post-coital bleeding and did not complain of any discharge, discomfort, or dys-

pareunia. The symptoms were mild, so the mass was probably undetected over a long period.

Immunocytochemical labeling of the tumor cells is essential. In this case, we confirmed the diagnosis, demonstrating by immunohistochemistry positivity for S-100 protein and vimentin, and negativity for smooth muscle α-actin and desmin. It may also have CD34 sub-capsular expression; however, this was not the case.

Simple resection of the mass is the indicated treatment. Prognosis is usually good, and the recurrence rate and risk of malignant transformation are meager in such cases.

The patient in the present case underwent complete surgical resection and had no recurrence during the follow-up period.

CONCLUSION

The authors present a rare case of vaginal schwannoma diagnosed in a post-menopausal patient, presenting only with post-coital bleeding. As this is a common disease in a rare location, the differential diagnosis of schwannomas from other vaginal tumors is crucial, as well as the pre-operative exclusion of malignancy. Based on the histopathological and immunohistochemical characteristics, the diagnosis of schwannoma can be confirmed, even if the location of the tumor is unusual. Transvaginal surgical resection is curative. The recurrence rate and the risk of malignant transformation are meager.

CONFLICT OF INTEREST

The authors do not report any potential conflict of interest.

ETHICAL APPROVAL

All procedures performed in studies involving human participants were following the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

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