

Large Vulvar Fibroepithelial Stromal Polyp Vs. Aggressive Angiomyxoma: The Importance of Histopathological and Immunohistochemical Diagnosis. A Case Report

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ABSTRACT

We present the case of a 34-year-old woman with a history of asthma, cesarean section, and bilateral tubal ligation, who reported progressive growth of a tumor on her right labium majus over nine years. Initially measuring 1 × 1 cm, it subsequently reached approximately 12 × 8 cm, causing discomfort during ambulation. Abdominopelvic computed tomography revealed a lobulated vulvar soft tissue lesion without evidence of deep infiltration. Complete surgical excision of the lesion was performed, revealing a tumor originating from the right labium majus and not adherent to deeper tissues. Histopathological examination revealed a stromal polyp. A 12.5 × 8 × 3 cm fibroepithelial lesion was found to be negative for malignancy. Immunohistochemistry showed positivity for desmin, CD34, and smooth muscle actin, confirming the diagnosis. The postoperative course was satisfactory, with no recurrence or complications. Stromal polyps fibroepithelial Vulvar tumors represent a rare entity whose main diagnostic challenge lies in differentiating them from other mesenchymal neoplasms Vulvar polyps , particularly aggressive angiomyxoma , are often compared to stromal polyps due to their clinical and histopathological similarities. Although they are usually lesions smaller than 5 cm, there are exceptional reports of massive growth. Definitive diagnosis requires surgical excision and histopathological analysis supplemented with immunohistochemistry . Positivity for desmin, CD34, and smooth muscle actin supports the benign mesenchymal origin of the lesion. Complete resection is the treatment of choice, as incomplete resections are associated with local recurrence. fibroepithelial Vulvar lesions are rare benign lesions that should be considered in the differential diagnosis of slow-growing vulvar masses. Histopathological and immunohistochemical evaluation is essential to distinguish them from aggressive neoplasms. Complete surgical excision allows for confirmation of the diagnosis, relief of symptoms, and a reduction in the risk of recurrence, thus improving patients' quality of life.

KEYWORDS: Neoplasms , Fibroepithelial , Myxoma , Vulvar Diseases , Vulvar Neoplasms , Genital Neoplasms , Female .

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I. INTRODUCTION

The vulva corresponds to the external female genitalia and includes the mons pubis, labia majora and minora, clitoris, vulvar vestibule, urethral meatus, vaginal introitus, as well as the greater vestibular and paraurethral glands. From an embryological perspective, it derives from the interaction of the cloacal endoderm, the ectoderm of the urogenital sinus, and structures of paramesonephric origin. Due to its anatomical and embryological complexity, the vulva can be affected by a wide range of pathologies. Therefore, the available information on vulvar diseases is scattered across various specialties, including dermatology, gynecology, genitourinary medicine, and pathology, effectively underscoring the great complexity of vulvar diseases and the need for texts that provide knowledge about them (1, 2).

Regarding vulvar tumors, the majority are benign. However, the wide variety of differential diagnoses, coupled with their relatively low frequency, makes their diagnostic approach a clinical challenge. In many cases, these lesions lack pathognomonic clinical characteristics, so excisional biopsy is often necessary to establish a definitive diagnosis (2). The most recent classification of tumors of the female genital tract, updated by the World Health Organization (WHO) in 2020, includes both benign and malignant neoplasms. This classification includes mesenchymal tumors, a group that includes stromal polyps, fibroepithelial (3, 4).

Stromal polyps Fibroepithelial tumors are benign cutaneous tumors of mesenchymal and ectodermal origin. They occur most frequently in areas of skin folds, such as the neck, armpits, and submandibular and inguinal regions. Their location in the genital region is rare; the first report of this entity in the vulva was described by Ostor in 1988, in a series of 13 cases. In the vulvar region, the most common location is the labia majora, although they can also occur in the labia minora, clitoris, vestibule, paraurethral region, and posterior commissure (5, 6, 7).

In lesions located on the labia majora, progressive growth and elongation of the pedicle can lead to the formation of pedunculated fibromas. These lesions generally do not exceed 5 cm in diameter; however, exceptional cases of large size have been described, such as the 42 cm lesion reported by Kumar et al. in 2025, and another described by Avidime et al. 2017 32 × 29 cm. (5, 6, 7).

stromal polyps Fibroepithelial lesions usually present as painless, slow-growing masses. In some cases, they may be associated with bleeding, discharge, local discomfort, ulceration, or signs of inflammation. It is important to note that, regardless of the organic symptoms, these lesions can have a significant impact on patients' quality of life, including psychosexual dysfunction (7).

The pathophysiology of this condition is not fully established; however, it has been associated with metabolic disorders such as obesity, diabetes mellitus, insulin

resistance, dyslipidemia, and hypertension. There is also evidence of hormonal influence in its development, which could explain its higher frequency in women of reproductive age, as well as its association with pregnancy and the postpartum period, reported in approximately 15% of cases (7).

stromal polyps Fibroepithelial neoplasms can present a challenge, due to their similarity to other mesenchymal neoplasms Vulvar. Among the main differential diagnoses are aggressive angiomyxoma, angiomyofibroblastoma, cellular angiofibroma, superficial angiomyxoma, and prepubertal vulvar fibroma, since, for example, entities such as angiomyxoma are confused with benign pathologies in up to 80% of cases, which is why it is important to ... Characterization. These entities share histological characteristics such as a myxoid or edematous stroma, abundant vascularization, and proliferation of fibroblasts or myofibroblasts. Therefore, it is essential to rule out malignancy in all cases. From a microscopic point of view, the stromal polyp Fibroepithelial carcinoma is characterized by the presence of stellate and multinucleated stromal cells, located near blood vessels or at the epithelium-stroma interface. Immunohistochemically, these cells are usually positive for vimentin, smooth muscle actin (SMA), and estrogen and progesterone hormone receptors (7, 8, 9).

The treatment of choice is complete surgical excision. Incomplete resection is associated with a risk of recurrence, so long-term clinical follow-up is recommended, even in patients with successful initial treatment (8).

II. CLINICAL CASE

We present the case of a 34-year-old woman, gravida 2, para 1, vaginal delivery 1, with a history of tonsillectomy at age 13, cesarean section at age 25, bilateral tubal ligation at age 34, and asthma managed with rescue medication. Her current condition began 9 years prior to her evaluation, with the growth of a tumor on her right labium majus that initially measured 1x1 cm, without seeking medical attention. Eight years after its initial appearance, the lesion exhibited exponential growth, reaching an approximate size of 12 cm in its largest diameter. This caused discomfort during ambulation, so the patient was referred to the gynecology and obstetrics service. A diagnostic workup was performed, including an abdominopelvic CT scan, which revealed an irregular lesion of the vulva with lobulated borders and a slight extension of surrounding fatty tissue. The retroperitoneal lymph nodes were normal. Laboratory tests were unremarkable. Excision of the vulvar tumor (Figure 1) was performed on April 15, 2024. The following findings were obtained: a tumor originating from the right labium majus, approximately 12.5 cm long, 8 cm at its widest point, and 3 cm thick, not adherent to deeper tissues (Figure 2). The patient was discharged and continued

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follow-up in the outpatient clinic with no reported postoperative complications .



Figure 1. Surgical approach



Figure 2. Surgical specimen

A pathology report was collected on May 27, 2024, which reported a stromal polyp. A fibroepithelial lesion measuring 12.5 x 8 x 3 cm tested negative for malignancy. Immunohistochemistry is suggested due to the primary differential diagnosis of angiomyxomas. Vulvar. Immunohistochemistry was performed , with results on November 8, 2024, reporting: desmin (D33) reactive with expression in the cytoplasm, CD34 (QBEND/10) reactive with expression on the membrane, and AML (1A4) reactive with expression in the cytoplasm. The result was negative

for malignancy, confirming the diagnosis of a stromal polyp . fibroepithelial (Figure 3).

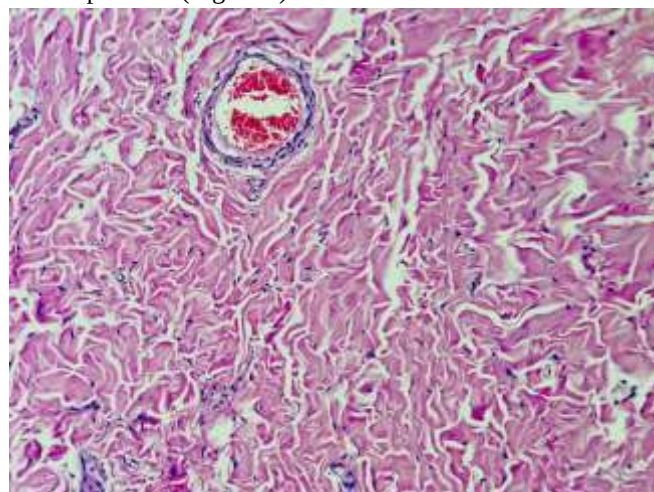


Figure 3. Histopathological section: The lower portions show arterioles alternating with connective tissue. No atypia, mitosis, or necrosis is observed. No neovascularization or myxoid areas suggestive of any other neoplasm (angiomyofibroblastoma / aggressive angiomyxoma) .

The patient's follow-up concludes with complete remission of symptoms. ■ (Figure 4).



Figure 4. Post-surgical results

III. DISCUSSION

Stromal polyps fibroepithelial Vulvar tumors are a rare benign entity within the spectrum of mesenchymal tumors of the female genital tract. Their clinical relevance lies not in their biological aggressiveness, but in their clinical and histopathological similarity to potentially aggressive mesenchymal neoplasms , which makes their diagnosis a significant challenge (9, 10).

vulvar masses are benign lesions; however, their nonspecific presentation and the absence of pathognomonic clinical features necessitate considering multiple differential diagnoses. Therefore, surgical excision with histopathological examination remains the gold standard for establishing a definitive diagnosis (10,11). In the case

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presented, the progressive growth over several years, followed by a recent accelerated increase, is consistent with what has been described in the literature, particularly in contexts of hormonal influence or metabolic alterations (6).

The size of the lesion in this patient (12.5 cm) places it among the rare cases, as these polyps typically do not exceed 5 cm in diameter. However, exceptional cases of massive growth have been reported, such as those described by Kumar et al. 2025 and Avidime. et al. 2017, which suggests that, although benign, these tumors can reach considerable dimensions in the absence of timely treatment. This behavior is consistent with the clinical evolution observed in our patient, who presented progressive growth for approximately nine years (12,13).

One of the most relevant aspects of this case is the need to differentiate this lesion from other mesenchymal neoplasms. Vulvar lesions, particularly aggressive angiomyxoma. The latter can be clinically confused, in a high percentage of cases, with benign lesions, due to its slow growth and similar clinical characteristics. The importance of this differentiation lies in its locally infiltrative behavior and its high recurrence rate, unlike the fibroepithelial polyp, which has a benign course (14).

From a histopathological point of view, the findings observed in this case, including the presence of multinucleated and stellate stromal cells in a myxoid stroma with abundant vascularization, are characteristics that confirm the diagnosis of stromal polyps. fibroepithelial. Likewise, the reported immunohistochemical profile (positivity for desmin, CD34 and smooth muscle actin) is consistent with that described in the literature, supporting the mesenchymal origin of the lesion and contributing to ruling out aggressive angiomyxoma, its main differential diagnosis (13, 15, 16).

Complete surgical excision, as performed in this case, has been the preferred treatment. Complete resection is essential, as incomplete excision has been associated with local recurrence. In our patient, the postoperative course was satisfactory, with no evidence of recurrence or complications, which is consistent with the expected clinical behavior of this condition (15).

Additionally, it is important to highlight the functional and psychological impact that these lesions can generate. Despite their benign nature, their size and location can cause physical discomfort, gait disturbances, and impairment in the psychosexual sphere, as occurred in this case, which reinforces the need for timely intervention (11).

This case reinforces the need for a systematic approach in the study of vulvar masses, prioritizing complete resection as a diagnostic and therapeutic method, since clinical and imaging studies alone do not allow a reliable differentiation between benign lesions and aggressive mesenchymal tumors.

IV. CONCLUSION

Stromal polyps fibroepithelial Vulvar tumors are uncommon benign lesions whose main challenge lies in their clinical and histopathological similarity to aggressive mesenchymal neoplasms, particularly aggressive angiomyxoma. The case presented illustrates the importance of considering this diagnosis among slow-growing vulvar tumors, even when they reach unusual dimensions.

The diagnostic approach should include an adequate clinical evaluation complemented with imaging studies when deep involvement is suspected, with complete surgical excision with histopathological and immunohistochemical analysis being the gold standard to confirm the diagnosis and rule out malignancy.

This case also highlights the role of immunohistochemistry in differentiating these lesions from other mesenchymal neoplasms, allowing for a definitive diagnosis and guiding follow-up. Despite their benign nature, these lesions can have a significant functional and psychological impact, so timely treatment improves patients' quality of life.

Finally, the need for long-term clinical follow-up is emphasized due to the risk of recurrence associated with incomplete resections, as well as the importance of maintaining a high index of suspicion to optimize the diagnostic-therapeutic approach in this type of vulvar lesion.

V. INFORMED CONSENT

Informed consent was obtained from the patient involved for the publication of this article.

VI. GUIDELINES AND APPROVALS

This article was written in compliance with laws, regulations and guidelines institutional and committee institutional, thus as in accordance with the Helsinki Declaration of the Association World Medical: Principles Ethics for Research Medical Involving Participants Humans.

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