

Case Report

Aggressive angiomyxoma of vulva: a rare and interesting entity

Suman Kharkwal, Sushanta Sarkar*, Keerthana G.

Department of Surgical Oncology, ESIC Model Hospital & PGIMS, Basaidarapur, New Delhi, Delhi, India

Received: 08 September 2022

Revised: 04 October 2022

Accepted: 06 October 2022

***Correspondence:**

Dr. Sushanta Sarkar,

E-mail: sushanta07@gmail.com

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ABSTRACT

We report a case of a 44-year-old female with aggressive angiomyxoma arising from right labia majora. The patient presented with a gradually enlarging vulvar mass and was treated with wide local excision of the mass with R0 resection. Pre-operative and final histopathology was consistent with features of aggressive angiomyxoma. Angiomyxoma is a rare, benign, locally infiltrative mesenchymal tumor that occurs in females at reproductive age. Repeated recurrence and locally invasive characteristics of the tumor makes it important to be considered as a part of the differential diagnosis especially in cases of pelvic mass in females.

Keywords: Angiomyxoma, Vulva, Aggressive, Recurrent

INTRODUCTION

Aggressive angiomyxoma (AA) is a rare mesenchymal tumor which is found usually in females during their reproductive age. Steeper and Rosai first described AA in their 1983 case series as a rare, slow-growing and locally infiltrative neoplasm with a tendency for recurrence.¹ Due to the infiltrative nature of the tumor and frequent local recurrence, it is termed as aggressive. The World Health Organization defines AAM as a “tumor of uncertain differentiation” with approximately 350 known cases till date.² It is often misdiagnosed as an abscess, Bartholin gland cyst, or lipoma.³ Microscopically, sections showed many walled vessels of various sizes, a loose myxoid and collagenous stroma and stellate and spindle-shaped neoplastic cells. Immunohistochemically, the neoplastic cells showed strong positivity for vimentin and desmin and moderate positivity for CD34 and hormone receptors for estrogen and progesterone.⁴

Surgery with wide local excision is the treatment of choice. Newer modalities include gonadotropin-releasing hormone (GnRH) therapy and radiotherapy or embolisation for recurrences.⁵

CASE REPORT

A 44-year-old female presented to our out-patient clinic with a huge, pedunculated growth arising from her right labia majora which gradually increased in size over the last years. The growth was painless and the skin and mucosa were normal on appearance. She had no symptoms of pain, bleeding, vaginal discharge or change in bowel and bladder habits. Examination revealed a 5 cm spherical, mobile mass arising from the right labia with normal appearing mucosa and skin. Per vaginal and per rectal examination were unremarkable. Patient underwent biopsy at the previous centre and histopathology was suggestive of aggressive angiomyxoma (AA). Patient was admitted and underwent wide local excision in our setup. Intraoperatively, the tumour was found to be excessively vascular but resection with appropriate margins was performed.

Histopathology report was consistent with aggressive angiomyxoma with negative and adequate margins and immunohistochemistry (IHC) report stated that the tumor was positive.

Patient had an uneventful postoperative period and till date has not presented with local or systemic recurrence.

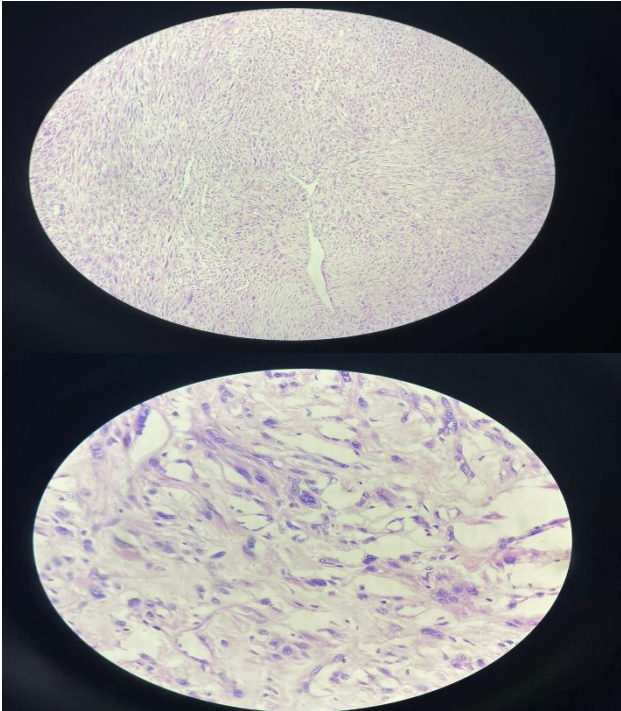


Figure 1: Microscopic appearance of aggressive angiomyxoma.

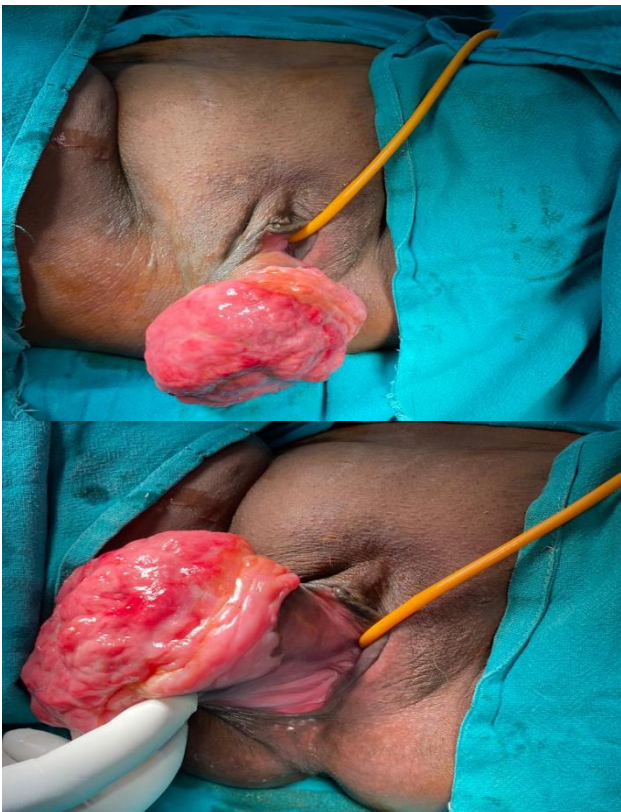


Figure 2: Pre-operative appearance of the growth originating from right vulva.

DISCUSSION

AA is a benign mesenchymal neoplasm with high predisposition for recurrence and locally invasive properties. Male to female ratio is 1:6 and the peak incidence is seen in the 4th decade.⁶ It is often misdiagnosed as leiomyoma, condyloma acuminata, bartholin duct cysts, lipoma, abscess, sarcoma, hernia, gartner duct cyst or vaginal wall cyst.³ Angiomyxoma is most often found in the lower pelvis including the genital and perineal region. Though rare in men, it can occur in areas such as perineum, spermatic cord, inguinal region and scrotum mimicking testicular tumor, inguinal hernia, hydrocele, or spermatocele.⁷

The pathogenesis of AA is still under evaluation. Researches demonstrate a translocation at chromosome 12, with a consequent aberrant expression of the high-mobility group protein isoform I-C (HMGIC) protein involved in deoxyribonucleic acid (DNA) transcription. This may be used in future as a marker for residual disease.⁸ Rearrangement of the architectural transcription factor HMGA2, located on chromosome 12q13-15, has been shown in some studies and may result in aberrant HMGA2 protein expression.¹⁶ Although HMGA2 is not a specific marker of aggressive angiomyxoma, it could be vital in the detection of small foci of residual or recurrent tumor and in assessment of margins.¹⁷ In a case where a woman with aggressive angiomyxoma who was responsive to estrogen antagonist therapy, a novel translocation HMGA2-YAP fusion was described, generating hope for new target therapies.¹⁸

Tumors detected during pregnancy show a rapid rate of growth owing to increased estrogen and progesterone production during this period indicating that the tumor maybe amenable to hormonal treatment.³

Patients diagnosed with AAM usually present with a single mass ranging from 1 cm to 60 cm in size and are usually asymptomatic.⁹ Diagnosis is usually made by self or during routine examination though some patients may present with pain, dysuria, dysmenorrhea and constipation as a consequence of pressure effect on adjacent organs.¹⁰

Multiple imaging techniques may be used to aid in diagnosis but appearance is variable but a characteristic “swirling” pattern maybe seen on magnetic resonance imaging (MRI), due to the myxoid composition. On computed tomography (CT), it may be hypodense to muscle, or have both cystic and solid components and demonstrate significant contrast enhancement, likely due to the high internal vascularity.¹¹

Ultrasound may show a homogeneous hypoechoic mass with internal blood flow.¹²

Grossly, the tumor is tan-pink to tan-grey, bulky with a rubbery consistency and glistening, gelatinous cut surface.

Areas of haemorrhage, congested blood vessels, or fibrosis may be present.⁹

Microscopically, these tumors show low to moderate cellularity and are composed of relatively uniform, small, stellate, and spindle cells set in a loosely collagenous, myxoedematous matrix with scattered vessels of varying calibre.¹³ Mitotic figures are infrequent and not atypical, and there is no necrosis within the tumor.¹⁴

On immunohistochemistry, these tumors are positive for estrogen and progesterone receptors (ER and PR) which is one of the most characteristic features.^{3,15} It also expresses vimentin, desmin, and smooth muscle actin (SMA) and is negative for S-100 with low Ki-67 index.^{3,16}

The gold standard for treatment is excision with negative margins. Deep seated tumours might need extensive surgery involving pelvic organs and might cause morbidity.²⁰ Recurrence rates lie in the range of 25% to 47% and almost 85% recurrence occurs within 5 years of initial surgery.³ Residual disease can be managed by close follow up or medical management which includes GnRH agonists or SERM or a combination of both.²⁰

There is no consensus or established role of chemotherapy and radiotherapy in the treatment of this condition. But there are isolated reports of use of radiotherapy in neoadjuvant and adjuvant settings to reduce the size of tumor or to treat recurrences and residual disease respectively.³ Gonzaga et al performed lymph node dissection in a case of AA misdiagnosed as urethral rhabdomyosarcoma.²¹ Lung metastasis have been documented very rarely in case reports and as such there is no consensus on the management of metastasis which might ultimately include excision and medical management used for recurrences.²¹

CONCLUSION

AA is a rare tumor which is clinically important because of its rapid growth rate, high rates of recurrences and potential for morbidity. Imaging and biopsy are keys to preoperative diagnosis. Surgery is the mainstay of treatment of primary disease, recurrences and metastasis. Medical management including GnRH agonists and SERM and radiotherapy may be used in neoadjuvant and adjuvant settings. Long term follow up is warranted because of high rates of local relapse.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: Not required

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Cite this article as: Kharkwal S, Sarkar S, Keerthana G. Aggressive angiomyxoma of vulva: a rare and interesting entity. *Int Surg J* 2022;9:1913-6.