RESEARCH PAPER

Angiomyxolipoma: A Rare Confluence of Adipose, Myxoid and Vascular Elements- A Case Report

Dr. Shraddha Khanke[1], Dr. Nimisha Choudhary[2*], Dr. Arpana Dharwadkar[3], Dr. Charusheela Gore[4]

[1]Assistant Professor, Department of Pathology,
Dr. D.Y. Patil Medical College, Hospital and Research Center, Dr DY Patil Vidyapeeth,
Pimpri, Pune - 411018, India, Email: shraddhakurekar1@gmail.com
[2]Junior Resident, Department of Pathology,*
Dr. D.Y. Patil Medical College, Hospital and Research Center, Dr DY Patil Vidyapeeth,
Pimpri, Pune - 411018, India, Email: nimishachd@gmail.com.
[3]Professor, Department of Pathology,
Dr. D.Y. Patil Medical College, Hospital and Research Center, Dr DY Patil Vidyapeeth,
Pimpri, Pune - 411018, India, Email: arpana.dharwadkar@dpu.edu.in.
[4]Professor and Head of Department, Department of Pathology,
Dr. D.Y. Patil Medical College, Hospital and Research Center, Dr DY Patil Vidyapeeth,
Pimpri, Pune - 411018, India, Email: charusheela.gore@dpu.edu.in.

ABSTRACT

Lipoma is the most common benign mesenchymal tumour, with angiomyxolipoma (AML) being one of its rarest variants. This rare soft tissue tumour exhibits the distinctive combination of the presence of mature adipocytes, which are embedded within a myxoid stroma, accompanied by a rich vasculature. Owing to its rarity, it often remains unlooked but an important differential diagnosis amongst various lipomatous lesions. This case report describes the clinical presentation, histopathological features, and management of a 56-year-old male diagnosed with a rarely found angiomyxolipoma at a very rare site, the nape of the neck.

Keywords: Lipoma, Angiomyxolipoma.

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INTRODUCTION

Classically lipomas constitute about 80% of all lipomatous tumours, while the variants such as angiomyolipoma, angiolipoma, myxolipoma and myolipoma comprise the remaining 20% [1,2]. Angiomyxolipoma (AML) is a scarce lipoma variant first described by Mai et al. in 1996 [1]. It is a benign soft tissue neoplasm composed of mature adipocytes with the presence of background myxoid stroma and vasculature in abundance. To date, approximately 24 cases have been reported in the literature, involving diverse anatomical sites including the spermatic cord, extremities, oral cavity, scalp and subungual tissue [1–5].

CASE REPORT

A 56-year-old male came to the surgical OPD with complaints of an asymptomatic swelling over the nape of the neck for 1.5 years. The swelling was insidious in onset and gradually progressive in nature. There was no history of trauma in the past. Upon examination, the said swelling measured approximately 5 × 5 cm, was cystic in consistency, and had a mild rise in local temperature. It was non-mobile, non-tender, and the overlying skin appeared normal. Clinical findings suggested a provisional diagnosis of lipoma.

Ultrasonography of the region revealed a large, well-defined, globulated encapsulated hypoechoic lesion at the described site, with differential considerations being epidermal inclusion cyst and lipoma. No FNAC or biopsy was performed preoperatively.

The lesion was completely excised and submitted for histopathological evaluation. Gross examination revealed a well-circumscribed, globular, firm mass received in three pieces, the largest measuring 6.5 × 5 × 2.5 cm. The external surface was smooth, non-encapsulated, with focal areas of congestion. The cut surface was grey-white, homogeneous, and glistening. (Fig. 1) Representative sections were processed for microscopy.

Microscopic examination of multiple H&E-stained sections demonstrated a well-circumscribed lesion composed of prominent spindle-cell areas intermixed with mature adipocytes, intermixed with numerous thick and thin-walled blood vessels. The stroma was notably myxoid. No lipoblasts or atypical cells were seen. (Fig. 1) These findings were suggestive of angiomyxolipoma; however, immunohistochemistry (IHC) was performed for confirmation and exclusion of close differentials.

On IHC, mature adipocytes demonstrated S100 positivity, while the vascular component demonstrated CD34 positivity. Ki-67 labelling index was <1%. (Fig.1) These features favoured angiomyxolipoma.

Postoperatively, there was no recurrence or any other eventful occurrence.

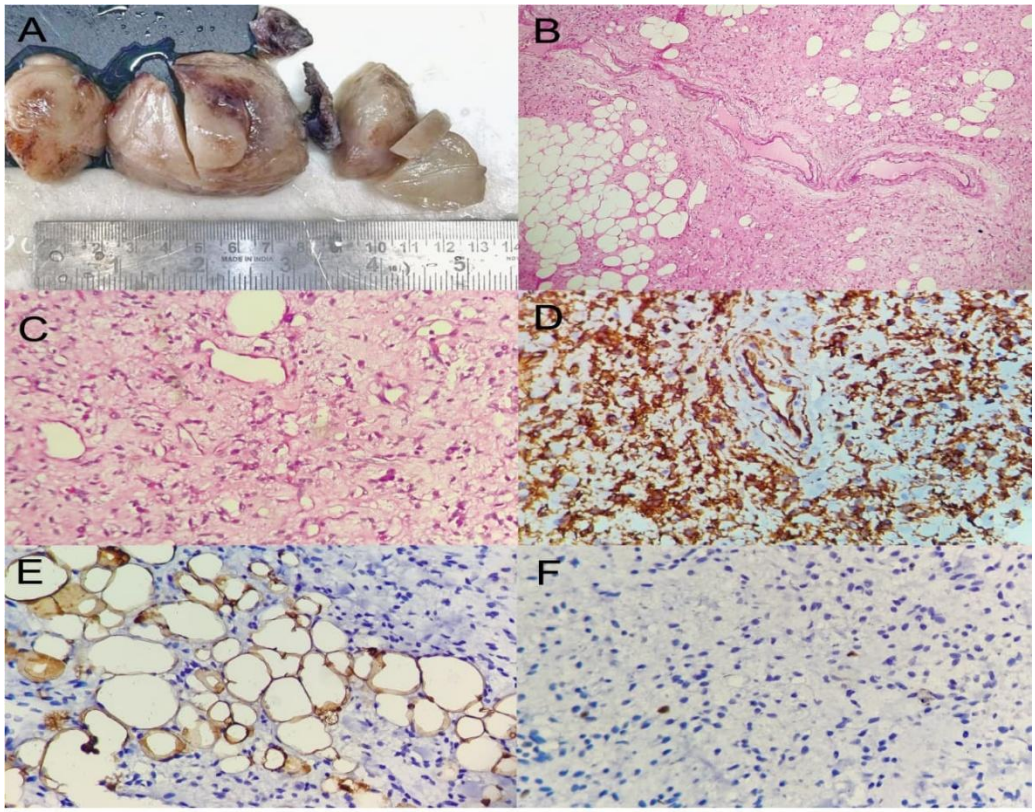

Fig. 1. (A) Gross picture demonstrates a well-circumscribed, encapsulated globular, firm mass received in three pieces with focal areas of congestion. (B) Microscopy reveals a well-circumscribed lesion composed of spindle cells admixed with mature adipocytes (H&E stain, x10). (C) Microscopy exhibits numerous blood vessels in myxoid stroma intermixed with adipocytes (H&E stain, x40). (D) The vascular component expresses CD34 (x40). (E) Mature adipocytes express S100 (x40). (F) Ki67 index is <1% (x40).

DISCUSSION

Lipomas are common benign mesenchymal tumours in adults, but are quite infrequent in children. They may be associated with obesity, trauma, endocrine abnormalities, or metabolic disorders [6]. Angiomyxolipoma, a rare variant of lipoma, is characterised by mature adipose tissue, a myxoid stroma, and abundant vasculature [1–7]. Unlike myxoid liposarcoma, AML lacks lipoblasts and typically presents as a well-demarcated but often non-encapsulated mass [7,8].

Initially described in the spermatic cord, AML has since been reported at various anatomical locations, including the extremities, thigh, knee, oral cavity, and subungual region [2–5]. Forehead and scalp cases have also been documented in recent years [9,10]. Histopathological examination was the mainstay for diagnosis. The characteristic triad—mature adipocytes, myxoid stromal change, and prominent vasculature—distinguishes AML from other benign and malignant myxoid tumours.

Immunohistochemistry is helpful when morphology overlaps with entities such as myxoid liposarcoma, spindle cell lipoma, myxoid fibrolipoma, angiolipoma, angiomyolipoma, and superficial angiomyxoma [4,7,8]. AML typically shows S100 positivity in adipocytes and CD34/CD31 positivity in the vascular network, with a low proliferative index (<5%) [10–12].

AML commonly presents as a slow-growing, painless, solitary soft-tissue mass, more frequently in men, particularly in the fifth to sixth decade of life [3,9]. Imaging such as ultrasound and MRI may show a well-defined lesion with mixed echogenicity and myxoid characteristics, though radiological findings are not diagnostic [3].

Complete excision is the choice to go for. Cases show excellent prognosis, with recurrence seen very infrequently and no evidence of any malignant transformation or metastasis [3,10].

CONCLUSION

Angiomyxolipoma is a very rare and distinct benign adipocytic neoplasm that warrants thorough histopathological assessment to avoid mistaking it with malignant myxoid tumours. The characteristic hallmark trial, namely myxoid stroma, extensive vascularity, and mature adipose tissue, clearly differentiates it from any other lipomatous lesions. This rare case emphasises the need

for clinical vigilance and proper evaluation, particularly in atypical locations or in cases of extensive lesions. Surgical excision remains curative, and continued documentation is a must to enhance the understanding of this uncommon tumour. Expanding our collective understanding of this rare entity will refine diagnostic precision, optimise patient management and reinforce its accurate recognition within the spectrum of various soft tissue tumours.

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