Scholars Journal of Medical Case Reports
Abbreviated Key Title: Sch J Med Case Rep
ISSN 2347-9507 (Print) | ISSN 2347-6559 (Online)
Journal homepage: https://saspublishers.com

OPEN ACCESS

Otorhinolaryngology

A Rare Benign Neck Tumor: Angiolipoma – Case Report and Literature Review

Ismail OUBLAHCEN[1,2*], Hamza BOUCHACHA[1,2], Hicham ATTIFI[1,2], Nabil TOUIHEM[1,2], Ali BOUKHARI[1,2], Mounir HMIDI[1,2]

[1]Department of Otorhinolaryngology, Head and Neck Surgery, Military Hospital Moulay Ismail of Meknes
[2]Faculty of Medicine, Pharmacy, and Dental Medicine of Fes

DOI: https://doi.org/10.36347/sjmcr.2026.v14i04.001 | **Received:** 28.01.2026 | **Accepted:** 27.03.2026 | **Published:** 01.04.2026

***Corresponding author:** Ismail OUBLAHCEN
Department of Otorhinolaryngology, Head and Neck Surgery, Military Hospital Moulay Ismail of Meknes

Abstract **Case Report**

Angiolipoma is an uncommon benign tumor of soft tissue, composed of mature adipose tissue interspersed with proliferative vascular channels. Its occurrence in the cervical region is extremely rare, with limited cases documented in the literature. We report a case of a patient presenting with a gradually enlarging, painless neck mass. Radiological evaluation demonstrated a well-defined lesion, and complete surgical excision was successfully performed without complications. Histopathological analysis confirmed the diagnosis of angiolipoma. A review of the literature was undertaken to highlight the clinical presentation, imaging features, and management strategies. This case underscores the need to consider angiolipoma in the differential diagnosis of cervical masses and supports surgical excision as the definitive treatment with an excellent prognosis.

Keywords: Angiolipoma; Rare neck tumor; Benign; Surgical excision.

1. INTRODUCTION

Angiolipoma is a rare benign tumor of adipose tissue, characterized by mature fat cells interspersed with a rich vascular network, which distinguishes it from conventional lipomas. While lipomas are among the most common benign soft tissue tumors, angiolipomas are less frequent and are typically found in the trunk and extremities, with cervical involvement being exceptionally rare [1].

In the neck, these tumors usually present as slow-growing, painless masses that may remain asymptomatic for long periods. Computed tomography (CT) scan is helpful for assessing the lesion's size, density, and extent, but definitive diagnosis depends on histopathological examination, which reveals the characteristic combination of adipose tissue and vascular proliferation [2,3].

Although benign, cervical angiolipomas may pose surgical challenges due to their proximity to important neurovascular structures and the risk of recurrence if excision is incomplete [2]. Reporting such rare cases is crucial to enhance clinical recognition and inform optimal management strategies for neck masses [1,3].

2. CASE REPORT

We report the case of a 27-year-old man, with no significant medical history, presenting a progressively enlarging left supraclavicular mass over the past three years.

Clinical examination:

On inspection, the left supraclavicular mass was visible beneath the skin, without associated cutaneous changes, erythema, or local warmth. On palpation, it was firm, mobile over both superficial and deep planes, well-circumscribed, mostly painless but with intermittent episodes of discomfort, and measured approximately 7 cm. The regional vascular and nervous structures were intact, and no cervical or supraclavicular lymphadenopathy was palpable. Shoulder and neck movements were preserved and symmetrical.

CT scan of the neck **(Figure 1)** demonstrates, at the left basicervical level, a well-defined mass with regular contours, measuring approximately 7 cm and located within the cervical soft tissues. This lesion exhibits a homogeneous, fat-predominant density, without any clearly identifiable soft tissue or vascular component on this section. There are no signs of infiltration of the adjacent structures. The muscular

planes and cervical fat spaces are preserved. The vascular axes are in place, without evidence of compression or invasion. No pathological cervical lymphadenopathy is identified.

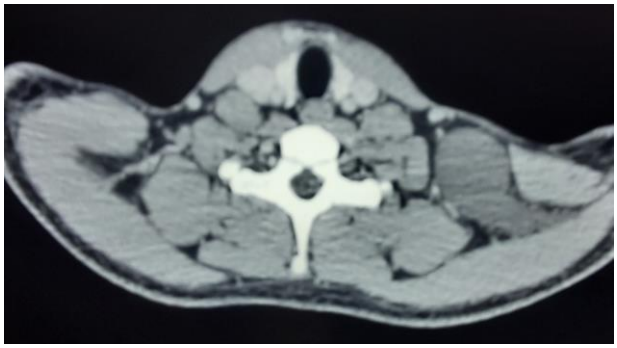

Figure 1: Axial CT scan of the neck demonstrating a well-defined left basicervical mass with a fat-predominant component, consistent with a benign appearance.

The patient underwent an exploratory cervicotomy under general anesthesia. Following a supraclavicular incision, the skin and muscular planes were carefully dissected to expose the lesion. The mass, well encapsulated, was almost entirely removed by surgical excision, with preservation of the adjacent vascular and neural structures. It corresponded to a subcutaneous tumor formation, well circumscribed, with a lobulated appearance, yellowish-orange coloration, and a smooth, glossy surface. The lesion appeared partially encapsulated by a thin, translucent fibrous membrane. Fine vascular striations and reddish areas were observed, reflecting a rich vascular component. Overall, the mass had a soft, fatty consistency, suggestive of a vascularized lipomatous proliferation (**Figure 2, 3**).

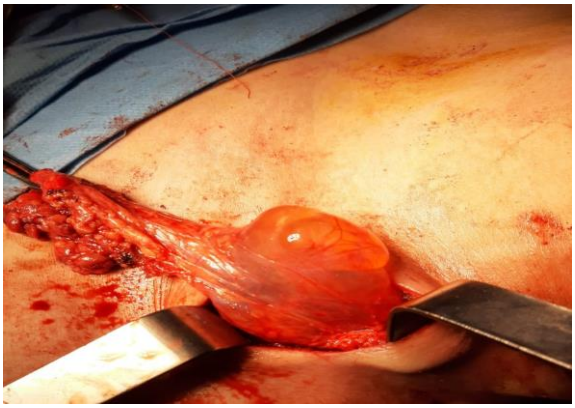

Figure 2: Intraoperative image demonstrating the surgical excision of a well-circumscribed, encapsulated left basicervical mass

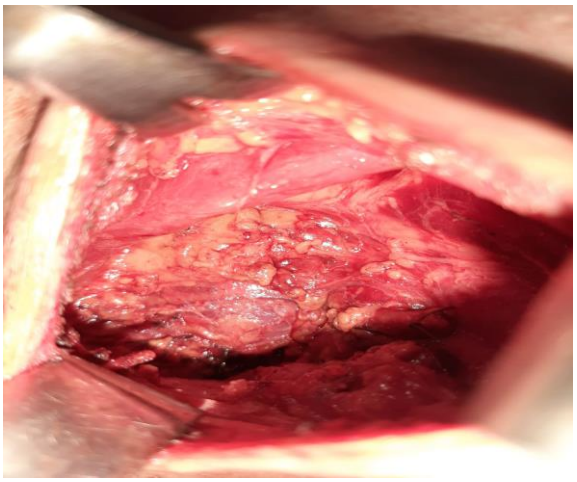

Figure 3: Intraoperative image of the surgical site after complete excision of a left basicervical mass, demonstrating preservation of the surrounding structures

The histological examination (Figure 4) shows a benign proliferation composed of lobules of mature adipocytes with clear cytoplasm and peripheral nuclei, separated by thin connective septa. Between these lobules, an abundant vascular component is observed, consisting of capillaries and small congested venules containing erythrocytes. The stroma is sparse, without atypia or mitoses. This appearance is consistent with an angiolipoma, characterized by the association of mature adipocytes and a vascular proliferation.

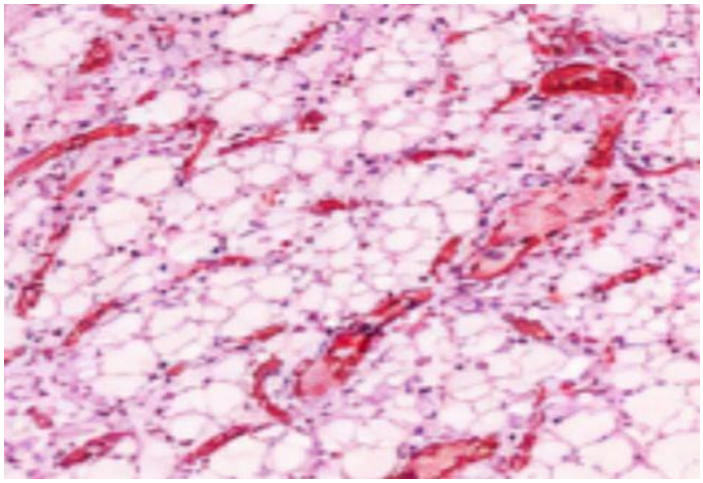

Figure 4: Histopathological examination of an angiolipoma, illustrating the morphological relationship between mature adipose tissue and vascular proliferation

The clinical follow-up over 2 years showed a favorable outcome, with no signs of recurrence, full preservation of mobility, and absence of symptoms. Follow-up visits were conducted regularly, ensuring careful monitoring of the operated region.

3. DISCUSSION

Angiolipoma is a rare benign soft-tissue tumor characterized by the coexistence of mature adipocytes and proliferating blood vessels, which distinguishes it from the conventional lipoma [1,2]. Histologically, these lesions typically appear encapsulated and lobulated, with capillary or larger-caliber vessels interspersed between the adipose lobules. The absence of nuclear atypia and mitotic activity confirms the benign nature of the tumor.

Two main forms have been described: circumscribed angiolipomas, which are usually subcutaneous and often multiple, and infiltrating forms, which are deeper and may involve muscles or underlying tissues, with a higher risk of recurrence [2,4]. Angiolipomas predominantly affect young to middle-aged adults, with a slight male predominance [2]. They account for approximately 5% of all soft-tissue lipomas, and their cervical localization is particularly rare [3,4].

This rarity explains the difficulty of clinical diagnosis and highlights the importance of imaging and histopathological evaluation. The pathophysiology remains poorly understood. Several hypotheses have been proposed, including adipocyte proliferation stimulated by local angiogenic factors, a hamartomatous origin related to dysregulation of adipose and vascular development, or genetic alterations influencing tissue growth [5,6].

Macroscopically, the mass is often firm and well circumscribed, particularly when the vascular component is predominant, which has important implications for surgical planning [2]. Clinically, cervical angiolipoma usually presents as a painless, slowly growing mass. Depending on its location and depth, the lesion may cause mechanical discomfort or compress deep cervical structures such as the trachea, esophagus, or cervical nerve plexus, occasionally leading to neurological symptoms such as hypoesthesia or muscle weakness [1,4]. The absence of pain does not exclude significant vascularization, which is often revealed during surgical excision.

Imaging plays a crucial role in diagnosis and preoperative planning. Ultrasonography typically shows a hypoechoic or slightly heterogeneous mass with detectable vascularization on color Doppler imaging [5]. Computed tomography (CT) demonstrates a hypodense mass with fat density and enhancement of the vascular components after contrast injection [5]. Magnetic resonance imaging (MRI) remains the imaging modality of choice, revealing a hyperintense signal on T1- and T2-weighted sequences corresponding to fat, with enhancement of the vascular component following gadolinium administration. MRI also allows evaluation of deep extension and relationships with cervical neurovascular structures, thereby facilitating surgical planning [2].

The differential diagnosis includes conventional lipoma, well-differentiated liposarcoma, hemangioma, and nerve sheath tumors such as schwannoma or neurofibroma [3]. Combined clinical,

radiological, and histopathological evaluation is essential to establish the diagnosis.

The treatment of choice is surgical, consisting of complete excision of the tumor [1,4]. In deep or large lesions, a multidisciplinary approach involving otolaryngologists, vascular surgeons, and neurosurgeons may be recommended to preserve adjacent structures [1,2]. Postoperative complications are rare and may include hemorrhage, nerve injury, or unfavorable scar formation. The prognosis after complete excision is excellent. Local recurrence is uncommon, and no malignant transformation has been reported [1,2]. Clinical and radiological follow-up is nevertheless recommended, particularly for deep or infiltrating angiolipomas.

4. CONCLUSION

Angiolipoma occurring in the cervical region is an uncommon benign tumor that may pose diagnostic challenges due to its rarity and similarity to other neck masses. Radiological evaluation is essential for assessing tumor characteristics and its relationship with surrounding structures, whereas definitive diagnosis relies on histopathological examination. Complete surgical excision remains the gold-standard treatment and generally leads to excellent outcomes with minimal risk of recurrence. Reporting such rare cases contributes to a better understanding of their clinical presentation, diagnostic approach, and optimal management.

REFERENCES

1. Kransdorf MJ, Larsen BT, Goulding KA, Cumsky JL, et al. *Angiolipoma: a review of 778 lesions in 344 patients*. Skeletal Radiology. clinical presentation and symptoms including slow growth and common demographics of angiolipomas.2023;52(3):541-552. PubMed
2. Reiser V, Haj Yahya B, Chaushu G, Kaplan I, Hamzani Y. *Angiolipoma in the head and neck: imaging, diagnosis and management*. Medicina (Kaunas). 2020;56(6):283. PubMed
3. Ahmed A, Barakat M, Salameh Y, Al-Ali A. *A giant angiolipoma of the neck: case report*. Journal of Surgical Case Reports. 2025; online. PubMed
4. Arenaz Búa J, Luáces R, Lorenzo Franco F, et al. *Angiolipoma in head and neck: report of two cases and review of the literature.* Int J Oral Maxillofac Surg. 2010;39(6):610–615. doi: 10.1016/j.ijom.2009.12.021. Case series and literature review on head and neck angiolipomas, histology and imaging. .
5. Burt AM, Huang BK. *Imaging review of lipomatous musculoskeletal lesions.* SICOT J. 2017; 3:34. doi:10.1051/sicotj/2017015. Imaging characteristics of fat-containing tumors including angiolipomas. ultrasound and CT features distinguishing angiolipoma via imaging criteria.
6. Sheybani EF, Eutsler EP, Navarro OM. *Fat-containing soft-tissue masses in children.* Pediatr Radiol. 2016;46(13):1760–1773. doi:10.1007/s00247-016-3690-z. Reviews fat-containing soft tissue masses and imaging features, relevant for differential diagnosis.