



Case Presentation

Giant Calcified Cervical Lipoma Mimicking Well-Differentiated Liposarcoma in a 74-Year-Old Male: A Case Report Following SCARE 2023 Guidelines

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ABSTRACT

Introduction: Lipomas are common benign mesenchymal tumors composed of mature adipocytes. Giant cervical lipomas are uncommon and may pose a diagnostic challenge due to their resemblance to malignant adipocytic tumors such as well-differentiated liposarcoma. We report a rare case of a giant calcified cervical lipoma presenting as a long-standing neck swelling with radiological features suggestive of malignancy.

Case Presentation: A 74-year-old male presented with a progressively enlarging painless neck swelling for approximately 20 years. Clinical examination revealed a firm mass predominantly involving the left side of the neck with extension across the midline. Ultrasonography demonstrated a large soft tissue lesion measuring 129 × 111 × 62 mm with calcific foci. Contrast-enhanced computed tomography revealed a fat-density lesion measuring approximately 95 × 108 × 88 mm causing displacement of adjacent cervical structures. Differential diagnoses included atypical lipomatous tumor and well-differentiated liposarcoma. Wide local excision was performed under general anesthesia. Histopathological examination demonstrated a benign encapsulated lipoma composed of mature adipocytes with focal calcification. The postoperative course was uneventful. The patient was discharged on postoperative day 11, sutures were removed on 27 April 2026, and no recurrence was observed during follow-up.

Discussion: Large cervical lipomas are rare and frequently mimic malignant soft tissue tumors on imaging studies. Although radiological investigations are useful for surgical planning, definitive diagnosis relies on histopathological examination. Complete excision remains the treatment of choice.

Conclusion: Giant cervical lipomas may clinically and radiologically simulate liposarcoma. Histopathological confirmation remains essential for diagnosis, and complete surgical excision provides excellent outcomes.

Keywords: Cervical lipoma; Giant lipoma; Neck mass; Liposarcoma; Calcification; Case report.

INTRODUCTION

Lipomas are the most common benign soft tissue tumors arising from mature adipocytes and account for approximately 50% of all mesenchymal neoplasms^{1,2}. They typically occur in the trunk and extremities, whereas only a small proportion arise in the head and neck region^{2,3}. Giant lipomas of the neck are particularly uncommon and can present significant diagnostic and therapeutic challenges.

A giant lipoma is generally defined as a lesion exceeding 10 cm in any dimension or weighing more than 1000 g^{3,5}. Because of their large size, deep location, and potential compressive effects, giant cervical lipomas often raise suspicion

of malignancy. Distinguishing these lesions from atypical lipomatous tumors or well-differentiated liposarcomas remains an important clinical consideration(7,8).

Imaging modalities such as ultrasonography, computed tomography, and magnetic resonance imaging provide valuable preoperative information; however, overlap in imaging characteristics between benign and malignant adipocytic tumors may lead to diagnostic uncertainty(7,8).

We report a case of a giant calcified cervical lipoma with a 20-year history that was initially suspected to represent a liposarcoma based on clinical and radiological findings.

This report is prepared in accordance with the SCARE 2023 guidelines(9).

CASE PRESENTATION

A 74-year-old male presented to the surgical outpatient department with a progressively enlarging swelling over the left side of the neck(Figure 1.a, 1.b). The swelling had been present for approximately 20 years and had gradually increased in size. The patient denied pain, dysphagia, dyspnea, voice changes, fever, weight loss, or other constitutional symptoms.

On examination, a large firm, non-tender neck mass was noted predominantly on the left side, extending across the midline toward the right side. The overlying skin appeared normal. No cervical lymphadenopathy was identified.

Ultrasonography of the neck performed on 25 March 2026 revealed a large well-defined soft tissue lesion measuring 129 × 111 × 62 mm with an estimated volume of 467 cc. Multiple echogenic foci with posterior acoustic shadowing and small cystic areas were noted. No significant vascularity was observed on color Doppler examination.

Contrast-enhanced computed tomography of the neck performed on 24 March 2026 demonstrated a large fat-density lesion measuring approximately 95 × 108 × 88 mm centered in the left neck and crossing the midline. Internal calcific foci were present. The lesion displaced adjacent structures including the sternocleidomastoid muscle, carotid vessels, submandibular gland, and airway without evidence of vascular encasement or tissue invasion. Differential diagnoses included atypical lipomatous tumor and well-differentiated liposarcoma.

Following preoperative evaluation and informed consent, the patient underwent wide local excision of the neck mass under general anaesthesia on 31 March 2026(Figure 3.a, 3.b)

Gross pathological examination revealed a yellowish encapsulated soft tissue mass measuring 15 × 12 × 4 cm. The cut surface showed mature adipose tissue with focal calcified areas(Figure 5).

Microscopic examination demonstrated a benign encapsulated neoplasm composed of mature adipocytes arranged in lobules separated by fibrous septa. Areas of calcification were identified. No cellular atypia, lipoblasts, mitotic figures, or necrosis were observed.

The final histopathological diagnosis was lipoma(Figure 5).

The postoperative period was uneventful. The patient was monitored in the intensive care unit for one day and discharged on 11 April 2026. Sutures were removed on 27 April 2026. Follow-up examination performed two weeks after discharge revealed satisfactory wound healing without evidence of recurrence(Figure 4).



Figure 1.a

Figure 1.b

Figure 1.a & 1.b Preoperative clinical photograph demonstrating a giant anterior cervical swelling extending predominantly from the left side of the neck with significant inferior projection and visible mass effect.



Figure 2

Figure 2. Intraoperative photograph showing the giant cervical mass after surgical preparation and skin marking prior to incision.



Figure 3.a



Figure 3.b

Figure 3.a & 3.b Intraoperative photograph demonstrating the surgical field following dissection of the lesion. A well-defined plane is visible between the mass and surrounding cervical structures, facilitating safe excision without major vascular invasion.



Figure 4

Figure 4. Postoperative follow-up photograph showing satisfactory cosmetic outcome after complete excision of the giant cervical lipoma with no evidence of residual swelling or recurrence.

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LAB REPORT

Patient Name: DEVENDRA SINGH
Patient ID: RSSH-0001849389/IPID - 807182
Referred By: Dr. Gyanendra Mittal
Floor Name: Second Floor

Age/Sex: 74/Male
Sample Date: Apr 1 2026 4:45PM
Prepare Date: Apr 22 2026 3:25PM
Ward Name: SECOND FLOOR

HISTOPATHOLOGY

Histopathology Single Specimen

H-2402/26- DEVENDRA SINGH-1849389

SPECIMEN :- Labelled as - Liposarcoma on neck

CLINICAL DETAILS/PROVISIONAL DIAGNOSIS: Liposarcoma on neck (Swelling on neck)

GROSS:- Received a yellowish well circumscribed soft tissue piece measuring 15x 12 x 4 cm. Outer surface appears capsulated. Cut surface shows yellowish soft areas along with calcified area seen.

No growth identified grossly

MICROSCOPIC EXAMINATION & IMPRESSION:-

Sections shows benign encapsulated neoplasm comprising of proliferated mature adipocytes arranged in lobules. These lobules are interspersed by fibrous septa. Individual adipocytes have eccentric nucleus and clear cytoplasm. Foci of calcification seen.

IMPRESSION:- Swelling of neck - Lipoma

ADVICE:- Clinico- Radiological correlation

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(Disclaimer: All investigations have their own limitations which are imposed by the limits of sensitivity and specificity of individual assay procedures as well as the specimens received by the laboratory. Isolated laboratory investigations never confirm the diagnosis of the disease. They only help in arriving at a diagnosis in conjunction with clinical presentation and other related investigations).

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Figure 5

Figure 5 Gross pathological examination revealed a yellowish encapsulated soft tissue mass measuring 15 × 12 × 4 cm. The cut surface showed mature adipose tissue with focal calcified areas.

DISCUSSION

The head and neck region accounts for approximately 13% of all lipomas, while giant cervical lipomas remain uncommon(2,3). The present case is noteworthy because of its prolonged duration, considerable size, calcific changes, midline extension, and radiological resemblance to well-differentiated liposarcoma.

Radiological evaluation plays a crucial role in characterizing cervical masses(7). Ultrasonography commonly demonstrates a well-circumscribed echogenic lesion, whereas CT typically reveals a homogeneous fat-density mass(7). However, internal septations, nodularity, calcifications, and large lesion size may complicate differentiation from atypical lipomatous tumors and liposarcomas(7,8).

In our patient, the lesion exhibited internal calcific foci and significant displacement of adjacent structures, leading radiologists to consider atypical lipomatous tumor and well-differentiated liposarcoma in the differential diagnosis. Nevertheless, the absence of tissue invasion and vascular encasement favoured a benign process.

Histopathological examination remains the gold standard for diagnosis(1,8). The presence of mature adipocytes arranged in lobules with absence of lipoblasts, atypia, mitotic activity, and necrosis confirmed the diagnosis of benign lipoma.

Complete surgical excision remains the preferred treatment for giant cervical lipomas(3-6). Surgery provides definitive diagnosis, relieves mass effect, improves cosmesis, and minimizes the risk of recurrence. Careful dissection is required because of the close proximity of vital neurovascular structures in the neck.

The favourable postoperative outcome observed in our patient further supports complete excision as the optimal management strategy(4,5).

CONCLUSION

Giant cervical lipomas are rare benign tumors that may closely mimic well-differentiated liposarcoma on clinical and radiological evaluation. Histopathological examination remains essential for definitive diagnosis. Complete surgical excision is safe, effective, and associated with excellent outcomes.

Ethical Approval

Ethical approval was waived as this study describes a single case report and all identifying patient information has been removed.

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images.

Funding

No funding was received for this study.

Conflict of Interest

The authors declare no conflict of interest.

Author Contributions

Dr. Abhilash Arya: Conceptualization, literature review, manuscript drafting.

Dr. Gyanendra Swaroop Mittal: Surgical management, manuscript review and supervision.

Dr. Bipin Chandra Joshi: Clinical data collection, radiological evaluation, manuscript review.

Highlights

- Giant cervical lipoma measuring 15 × 12 × 4 cm with a 20-year history.
- Radiological findings raised suspicion of atypical lipomatous tumor/well-differentiated liposarcoma.
- Lesion crossed the midline and produced significant mass effect on adjacent cervical structures.
- Histopathological examination confirmed a benign encapsulated lipoma with calcific foci.
- Complete surgical excision resulted in excellent postoperative recovery without recurrence.

Guarantor

Dr. Gyanendra Swaroop Mittal.

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