

# Lipoma of the Superficial Lobe of the Parotid Gland: A Case Report

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## Case Report

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## ABSTRACT

**Objectives:** Lipomas are common benign soft tissue tumors, but they are rarely found in the parotid gland. Because of their rarity at this site, they are not often considered in the differential diagnosis of parotid lumps. Magnetic resonance imaging (MRI) is today's Goal Standard imaging for parotid lipomas. Preoperative diagnosis remains difficult, and surgical excision is challenging due to the facial nerve possible injury.

**Case Report:** We report a case of a 48-year-old man who presented with a painless, slowly growing, mobile lump of the left parotid gland. Ultrasonography and Computed Tomography (CT) suspected lipoma of the superficial lobe of the left parotid gland. An enucleation was performed with an uneventful postoperative course. The histology analysis confirmed the diagnosis of lipoma.

**Conclusion:** Although lipomas of the parotid rarely occur, they should be considered in the preoperative differential diagnosis. Management could be successfully achieved in low-income countries using the imaging tools available.

**Key Words:** Cameroon, enucleation, lipoma, parotid gland, superficial lobe.

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## INTRODUCTION

Lipomas are benign tumors of the soft tissues located mainly in the upper back, abdomen, and shoulders<sup>[1]</sup>. In 13% of cases, they occur in the head and neck. Parotid localization is rare and represents between 0.6 and 4.4% of gland tumors<sup>[2]</sup>.

Because they rarely occur, parotid gland lipomas are not considered in the preoperative differential diagnosis<sup>[3]</sup>. This lesion appears as a slow-growing, asymptomatic, non-tender mass, and the most common preoperative impressions are Warthin tumor and benign mixed tumor<sup>[4]</sup>. Diagnosis is based on imaging, including computed tomography (CT) and magnetic resonance imaging (MRI), but only histology confirms the diagnosis<sup>[5]</sup>.

The treatment is based on surgical excision of the tumor and may require superficial or total parotidectomy, depending on the location of the lipoma. The authors report a case of lipoma developed from the superficial lobe of the left parotid, the main clinical, specific radiological, and therapeutic features of this tumor.

## CASE REPORT

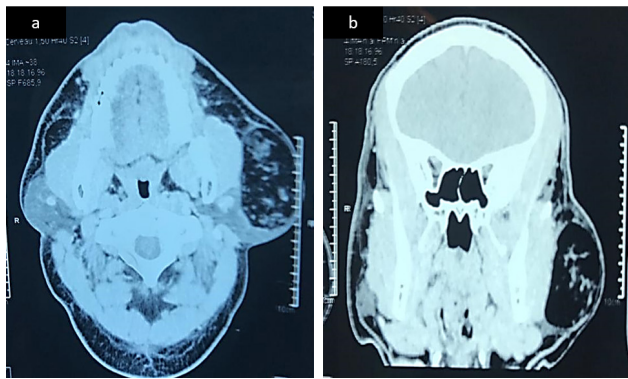
It was a 48-year-old patient with a painless swelling of the left parotid area, which had been evolving for six

years and gradually increasing. The clinical examination revealed a round swelling of soft consistency, measuring 11 cm in diameter, mobile concerning the superficial and deep planes. The overlying skin was normal and showed no facial paralysis (Figure 1). There was no cervical lymphadenopathy.



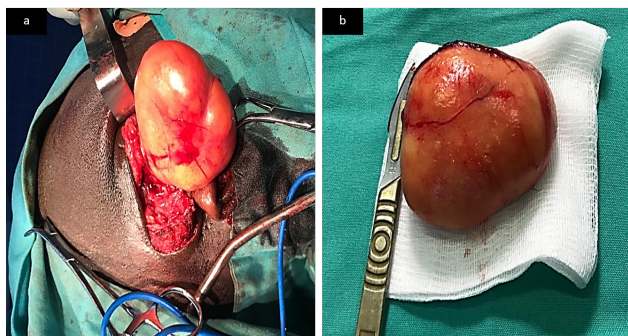
**Fig. 1:** Preoperative photograph of the patient demonstrating a swelling of the left parotid area.

Cervical ultrasound showed a left parotid homogenous and hypoechogenic lesion with no cervical lymphadenopathy. High-resolution post-contrast CT scan demonstrated a well-marginated hypodense formation of the left parotid. The lesion was poly-lobed, heterogeneous, and of greasy density, at the expense of the superficial lobe of the parotid, without cervical lymphadenopathy (Figure 2).



**Fig. 2:** High-resolution post-contrast CT scans show a spherical, well-marginated, lower attenuation lipoma from the left superficial parotid lobe. The lipoma was clearly defined from adjacent structures in axial (A) and coronal (B) views.

The tumor was excised under general anesthesia by giving a conventional parotidectomy incision. The superficial musculo-aponeurotic system was detached, and the fat mass was discovered. Following the cleavage plane between the group and the parotid, the tumor was enucleated without recourse to superficial parotidectomy (Figure 3). Histological examination of the resected specimen revealed the diagnosis of lipoma. No evidence of facial paralysis or Frey syndrome marked postoperative outcomes. No recurrence was noted after a decline of one year.



**Fig. 3:** Intraoperative picture with yellowish fatty tissue (A) and resected specimen (B).

## DISCUSSION

Lipomas are the most common benign mesenchymal encapsulated tumors, of which 25% are observed in the head and neck region and rarely arise in the parotid area. They are histologically similar to mature adipose tissue,

but the presence of a fibrous capsule differentiates them from simple fat aggregations<sup>[6]</sup>. Lipomas of the parotid gland have a male predilection (male-to-female ratio of 3:1), most frequently occurring in the fifth and sixth decades of life. They usually arise from the superficial lobe in about 75% of cases, whereas 8.5% of cases occur in the deep lobe, and about 16.5% occur in the deep and shallow lobe<sup>[7]</sup>. This was the present case.

Clinically, lipomas appear as a slow-growing, painless, mobile, and well-differentiated mass which may be frequently confused with pleomorphic adenoma, Warthin's tumor, parotid cyst, and benign mesenchymal neoplasms such as hemangioma and lymphangioma<sup>[8]</sup>. Although lipoma of the parotid gland associated with partial or total facial paralysis has been reported<sup>[9]</sup>, we did not find facial paralysis in our case. Clinical examination is insufficient in all cases to identify the nature and location of parotid lipomas. Hence, diagnosing parotid lipoma is challenging; Ultrasonography, CT scan, and MRI determine its diagnosis preoperatively<sup>[8]</sup>.

Ultrasonography has been used as an initial imaging study in cases suspected to have a head and neck mass. It may help differentiate the nature of lesions<sup>[10]</sup>. CT and MRI scans accurately localized 100% of the tumors concerning the parotid gland, enabling the surgeon to choose the most appropriate approach. In CT scan, lipomas show a homogenous mass with few septations and less than water density with -50 and -150 Hounsfield units densities, characteristic of lipoma. However, a CT scan does not help differentiate lipoma from surrounding fatty tissue. MRI remains the best diagnostic technique to accurately diagnose lipomas preoperatively by comparing the signal intensity on T1- and T2-weighted images. MRI can also clearly define the limits of lipoma from normal adipose tissue (subcutaneous tissue) with a "black rim" around the mass<sup>[11]</sup>. In our case, MRI was not affordable due to high cost, so we only performed Ultrasonography and CT.

The treatment of choice in case of a lipoma of the parotid gland is a complete surgical excision. The postoperative esthetic and functional results should be the primary concerns. Surgery modalities for the treatment of parotid gland lipoma remain controversial. Most surgeons suggest a formal superficial parotidectomy with total exposure of the facial nerve and its branches for deep parotid lobe lipoma. Lipomas of the superficial lobe of the parotid are easily treated with enucleation, superficial parotidectomy, or limited superficial parotidectomy<sup>[12]</sup>. We performed an enucleation in this case, and tumor recurrence was not observed two years after surgery.

## CONCLUSION

Although lipomas of the parotid rarely occur, they should be considered in the preoperative differential diagnosis. Management could be successfully achieved in low-income countries using the imaging tools available.

**CONFLICT OF INTERESTS**

There are no conflicts of interest.

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