TPM Vol. 32, No. S2, 2025
ISSN: 1972-6325
https://www.tpmap.org/

Open Access

WHEN COMMON PRESENTATIONS HIDE RARE PATHOLOGIES: A CASE OF INTRAPAROTID LIPOMA

DIVYA PRIYA S S[1]
SUDARSHAN P B[2]
[1]POSTGRADUATE, DEPARTMENT OF GENERAL SURGERY, SAVEETHA MEDICAL COLLEGE AND HOSPITAL, CHENNAI
[2]PROFESSOR, SAVEETHA MEDICAL COLLEGE AND HOSPITAL, CHENNAI

Abstract

Background: Lipomas are the most common benign mesenchymal tumours, but their occurrence within the parotid gland is extremely rare, accounting for <5% of parotid tumours. Their clinical similarity to more frequent benign salivary neoplasms often delays diagnosis.

Case Presentation: We describe a 65-year-old male with a slowly enlarging, painless right parotid swelling of two years' duration. Examination revealed a soft, mobile, non-tender mass elevating the earlobe with preserved facial nerve function. FNAC yielded adipocytic fragments suggestive of lipoma, while CT demonstrated a fat-density lesion confined to the superficial lobe of the parotid.

Management and Outcome: The patient underwent complete excision via a modified Blair incision with meticulous preservation of the facial nerve. Histopathology confirmed intraparotid lipoma. Postoperative recovery was uneventful, with intact facial function and excellent cosmetic outcome at three months.

Conclusion: This case underscores the rarity of intraparotid lipomas, highlights the value of imaging in diagnosis, and affirms that careful surgical excision ensures cure with minimal morbidity.

BACKGROUND

Lipomas are the most common benign mesenchymal neoplasms arising from mature adipocytes, but their occurrence within the parotid gland is rare. They account for only 0.6–4.4% of all parotid tumours, with large institutional series reporting incidences close to 1%[1,2]. Because of this rarity, coupled with their clinical resemblance to more frequent parotid tumours such as pleomorphic adenoma or Warthin's tumour, preoperative diagnosis often poses a challenge[3,4].

These tumours typically occur in middle-aged and elderly men, most commonly between the fifth and seventh decade[5]. Patients usually present with a slowly enlarging, painless, soft, and mobile swelling in the parotid region. The overlying skin remains normal, and facial nerve function is generally preserved, features that mimic benign epithelial tumours[6].

Radiological imaging is central to diagnosis. CT scan usually demonstrates a well-defined hypodense lesion with fat attenuation values between –50 and –150 Hounsfield units (HU), without contrast enhancement[7]. MRI, however, is considered the gold standard, showing hyperintensity on both T1- and T2-weighted sequences, with suppression on fat-saturated images, reliably distinguishing lipomas from other parotid masses[8,9].

Fine-needle aspiration cytology (FNAC) has variable utility. Although it may show adipocytic fragments suggestive of lipoma, low cellularity often limits its diagnostic accuracy[10]. Thus, histopathological confirmation following surgical excision remains the definitive diagnostic tool[11].

Surgical removal is the treatment of choice, most often via superficial parotidectomy or extracapsular dissection, with meticulous preservation of the facial nerve[12,13]. Outcomes are excellent, recurrence is exceedingly rare, and postoperative morbidity is minimal when performed with careful technique[14,15].

[

A 65-year-old male presented with a gradually progressive, painless swelling in the right parotid region, first noticed two years earlier. The swelling had slowly enlarged, causing cosmetic deformity but no pain, trismus, or neurological symptoms. There was no history of trauma, fever, weight loss, or constitutional complaints.

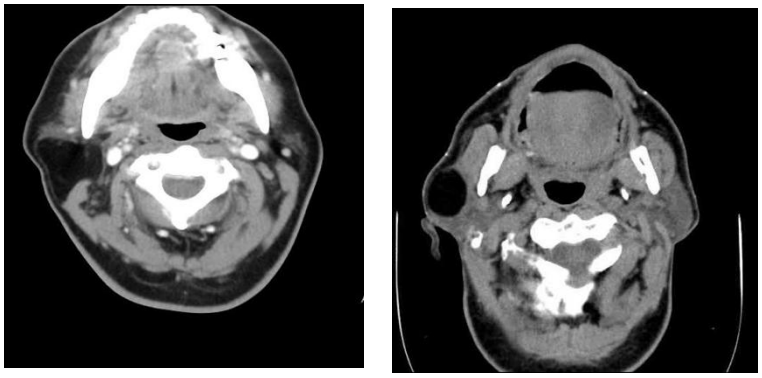
On examination, a 5 × 6 cm soft, mobile, non-tender mass was palpable in the right parotid region, elevating the earlobe. The overlying skin was normal, pinchable, and free of scars or sinuses. The swelling was not fixed to deeper tissues, and there was no cervical lymphadenopathy. Importantly, facial nerve function was intact, with no weakness of eye closure, cheek puffing, or lip movement.

Investigations

FNAC yielded a sparsely cellular smear with rare adipocytic clusters, eccentric nuclei, and scattered RBCs, suggestive of lipoma. Although FNAC was supportive, we recognised its limitations in conclusively ruling out lipomatous salivary tumours.

CT scan of the neck showed a well-defined hypodense lesion measuring 35 × 35 × 47 mm in the superficial lobe of the right parotid gland, with minimal extension into the deep lobe. The lesion demonstrated fat attenuation (–80 HU) without post-contrast enhancement, consistent with lipoma. MRI was not performed as CT findings were already classical and sufficient for surgical planning.

Figure 1 and 2- CT images showing hypodense lesion



Differential Diagnosis

The differential diagnosis of a **painless parotid swelling in an elderly male** includes:

- **Pleomorphic adenoma** – usually firmer, lobulated, and may have irregular margins on imaging. In our case, the uniform hypodense fat attenuation on CT and absence of heterogeneous enhancement excluded pleomorphic adenoma.
- **Warthin's tumour** – typically cystic-solid, often seen in older males, but FNAC usually shows oncocytic cells with lymphoid background. Absence of such cytology and the radiological fat density made this unlikely.
- **Sialolipoma** – a rare mixed lesion with adipose and salivary tissue elements. Histology is required to confirm, but imaging did not reveal glandular elements, and FNAC was purely adipocytic.
- **Lipomatous pleomorphic adenoma / oncocytic lipoadenoma** – these variants may mimic lipoma radiologically, but again, FNAC and gross imaging favoured a pure lipoma.
- **Malignant parotid tumours (liposarcoma, mucoepidermoid carcinoma with fatty stroma)** – excluded due to absence of rapid growth, pain, skin fixation, nodal involvement, or irregular/infiltrative margins on CT.

Thus, the working diagnosis of intraparotid lipoma was strongly supported preoperatively.

Outcome and follow up

The patient underwent surgical excision via modified Blair incision under general anaesthesia. Dissection was meticulous, with careful identification and preservation of the main trunk and branches of the facial nerve. The tumour was excised completely.

Postoperative course was uneventful. The drain was removed on day 3, and sutures on day 7. The patient reported no facial weakness, pain, or salivary leak. At 3-month follow-up, the surgical scar was well-healed, the parotid contour was preserved, and there was no evidence of recurrence. The patient expressed satisfaction with both functional and cosmetic outcomes.

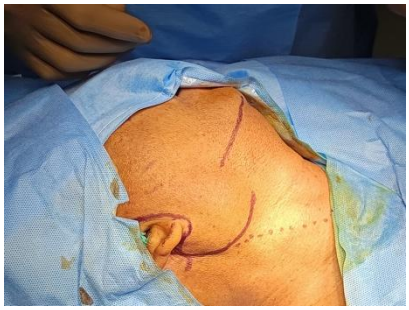
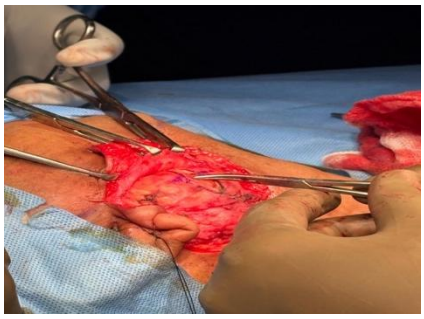
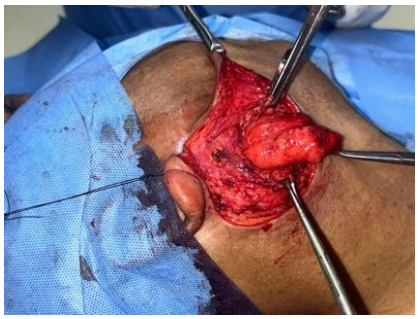




Figure 3, 4, 5 and 6: Intraoperative picture of Intraparotid lipoma

DISCUSSION

Lipomas are the most common benign mesenchymal tumours of adipose tissue, but their occurrence within the parotid gland is exceedingly rare, accounting for only 0.6–4.4% of all parotid tumours [1,2]. Large institutional reviews have reported incidences close to 1%, highlighting their rarity compared with pleomorphic adenoma and Warthin's tumour [3,4]. Because of this, intraparotid lipomas often pose a diagnostic dilemma, as they mimic more common benign salivary neoplasms in clinical presentation.

Patients typically present in the fifth to seventh decades, with a painless, soft, and mobile parotid swelling that gradually enlarges [5,6]. In our case, the elderly male presentation with an insidious two-year history was consistent with prior literature. The absence of skin changes, lymphadenopathy, and facial nerve dysfunction often reinforces a benign impression, making differentiation from other salivary tumours clinically difficult [7].

Imaging plays a central role in accurate preoperative diagnosis. CT scanning demonstrates well-defined hypodense lesions with attenuation values between –50 and –150 HU, consistent with fat [7]. MRI is considered the gold standard, showing hyperintensity on T1 and T2 with suppression on fat-saturated sequences, reliably distinguishing lipomas from other neoplasms [8,9]. In our patient, CT alone provided classical features sufficient for surgical planning.

FNAC has limited utility in diagnosing intraparotid lipomas. Although adipocytic fragments may be identified, low cellularity and sampling error often reduce accuracy [10]. Consequently, definitive diagnosis is histopathologicalfollowing excision [11].

Surgical management remains the treatment of choice. Options include superficial parotidectomy or extracapsular dissection, both aimed at complete excision with meticulous preservation of the facial nerve [12,13]. The modified Blair incision, as used in our case, provides excellent access while ensuring cosmetic outcomes. Reported recurrence rates are extremely low, and postoperative morbidity is minimal when surgery is performed with precision [14,15].

This case underscores that despite their rarity, intraparotid lipomas should be included in the differential diagnosis of parotid swellings. A combination of imaging, cautious cytology interpretation, and surgical excision ensures both accurate diagnosis and curative treatment.

Learning Points

- **Intraparotid lipomas are rare**, comprising <5% of parotid tumours, and often mimic more common benign salivary gland lesions.
- **Imaging is crucial**—CT shows fat attenuation, while MRI provides superior diagnostic accuracy by confirming fat suppression characteristics.
- **FNAC has limited sensitivity** in lipomas and cannot reliably exclude other lipomatous salivary tumours; histopathology remains the gold standard.
- **Surgical excision with careful facial nerve preservation** via approaches such as the modified Blair incision provides excellent functional and cosmetic outcomes, with recurrence being exceedingly rare.

REFERENCES

1) El-Anwar MW, Nofal AA, Khazbak AO, Tantawy AA. Parotid gland lipoma: a rare case report and review of the literature. Clin Med Insights Case Rep. 2013;6:155–8. doi:10.4137/CCRep.S12123
2) Aydin U, Karakoc O, Ozdemir R, Karslioğlu Y. Intraparotid lipoma: A rare parotid gland tumor. J Craniofac Surg. 2014;25(6):e534–6. doi:10.1097/SCS.0000000000000926
3) Zhuang Y, Li J, Wang D, Chen W. Intraparotid lipoma: a case report and review of the literature. Oncol Lett. 2015;10(6):3741–4. doi:10.3892/ol.2015.3791

4) Ryu J, Lim JY, Kim HS, Choi EC, Koh YW. Intraparotid lipoma extending to the parapharyngeal space: a case report. BMC Res Notes. 2016;9:227. doi:10.1186/s13104-016-2025-5
5) Radhakrishnan S, Manoharan S, Indiran MA. Lipoma of the parotid gland: An unusual presentation. J Oral Maxillofac Pathol. 2017;21(3):466. doi:10.4103/jomfp.JOMFP_108_17
6) Yoon TM, Kim SA, Lim SC. Lipomas of the parotid gland. J Craniofac Surg. 2018;29(3):e309–11. doi:10.1097/SCS.0000000000004295
7) Furukawa M, Yoshizawa A, Yagihashi A, Hirata Y. Imaging features of lipomas of the parotid gland: CT and MR findings. Clin Imaging. 2018;50:289–93. doi:10.1016/j.clinimag.2018.03.017
8) Singh R, Chauhan A, Goel S. Intraparotid lipoma: a rare entity. Indian J Otolaryngol Head Neck Surg. 2019;71(Suppl 1):748–51. doi:10.1007/s12070-018-1335-2
9) Jain S, Sharma R, Vashistha A, Rajan S. Intraparotid lipoma: diagnostic dilemma and review. Iran J Otorhinolaryngol. 2019;31(107):55–8. doi:10.22038/ijorl.2018.31126.2062
10) Daniels JS, Magarey MJ, Nash R, Coman WB. Lipoma of the parotid gland: a case report and review of the literature. Case Rep Otolaryngol. 2021;2021:8856943. doi:10.1155/2021/8856943
11) Ram H, Mohammad S, Chandra A, Singh G. Intraparotid lipoma: a report of two cases with review of literature. Natl J Maxillofac Surg. 2021;12(2):253–6. doi:10.4103/njms.NJMS_74_20
12) Niu Y, Tian L, Sun H, et al. Imaging and surgical management of intraparotid lipoma: case report and literature review. Medicine (Baltimore). 2022;101(9):e28978. doi:10.1097/MD.0000000000028978
13) Panda S, Mohapatra M, Rout S. Rare giant lipoma of parotid gland: a diagnostic challenge. J Oral Maxillofac Pathol. 2023;27(1):121–4. doi:10.4103/jomfp.jomfp_389_22
14) Chen L, Wu J, Zhang Y, et al. Clinical and imaging features of parotid gland lipoma: A case series and literature review. World J Clin Cases. 2024;12(2):362–9. doi:10.12998/wjcc.v12.i2.362