

Clinicopathological Spectrum and Histopathological Concordance in Parotid Gland Tumours: A Series of Ten Cases

PREETHIKA MURUGESAN¹, GANESH GURU², RAMALAKSHMI³, T RAGUPATHY⁴

ABSTRACT

Parotid gland swellings represent a heterogeneous group of benign and malignant lesions with overlapping clinical and radiological characteristics, often creating diagnostic challenges during preoperative evaluation. The present case series presents ten patients with parotid gland tumours managed surgically at a tertiary care center between January 2024 and July 2025. Patients presented predominantly with slowly enlarging painless preauricular swellings, while a minority demonstrated pain, rapid enlargement, or nodal disease suggestive of malignancy. Preoperative assessment included clinical examination, Ultrasonography (USG), selective cross-sectional imaging, and Fine-Needle Aspiration Cytology (FNAC) reported using the Milan System for Reporting Salivary Gland Cytopathology. Definitive management consisted of superficial or total conservative parotidectomy with emphasis on facial nerve preservation. Histopathological examination revealed a broad spectrum of lesions including pleomorphic adenoma, basal cell adenoma, nodular oncocytic hyperplasia, keratinous lymphoepithelial cyst, intraparotid lipoma, salivary duct carcinoma, mucoepidermoid carcinoma, and metastatic cutaneous squamous cell carcinoma. FNAC demonstrated concordance with final histopathology in the majority of cases, particularly in malignant lesions. However, diagnostic discordance was observed in selected oncocytic and cystic lesions, highlighting the known limitations of FNAC in certain salivary gland pathologies. Postoperative outcomes were generally favourable, with preservation of major facial nerve function in most cases. The current case series highlights the marked clinicopathological diversity of parotid gland tumours and emphasises the importance of correlating clinical, radiological, cytological, and histopathological findings for accurate diagnosis and optimal surgical management.

Keywords: Facial nerve, Fine-needle biopsy, Parotidectomy, Parotid neoplasms, Salivary gland neoplasms

INTRODUCTION

Tumours of the salivary glands are relatively uncommon and account for a small proportion of head and neck neoplasms [1]. The parotid gland is the most frequently involved major salivary gland, with most tumours being benign in nature [1,2]. However, malignant lesions remain clinically significant because of their aggressive biological behaviour, potential facial nerve involvement, and risk of regional metastasis [2,3]. The wide histopathological diversity of parotid gland tumours contributes substantially to diagnostic uncertainty and therapeutic complexity [2].

Patients commonly present with slowly enlarging painless swellings in the preauricular region irrespective of underlying pathology [1]. Clinical features such as pain, rapid enlargement, skin fixation, cervical lymphadenopathy, and facial nerve weakness may suggest malignancy but are not consistently present [3]. Imaging modalities including USG, Computed Tomography (CT), and Magnetic Resonance Imaging (MRI) aid in evaluating lesion extent, deep lobe involvement, and nodal disease [3-5]. Nevertheless, imaging findings often overlap between benign and malignant lesions [5]. FNAC remains an important component of preoperative assessment [4]. The Milan System for Reporting Salivary Gland Cytopathology (MSRSGC) has improved reporting uniformity and risk stratification; however, cytological interpretation continues to be challenging in oncocytic, cystic, and rare salivary gland lesions [4,6].

The present case series presents ten surgically managed parotid gland tumours demonstrating a broad clinicopathological spectrum. The report highlights diagnostic challenges, surgical management, histopathological diversity, and postoperative outcomes.

CASE SERIES

Case 1

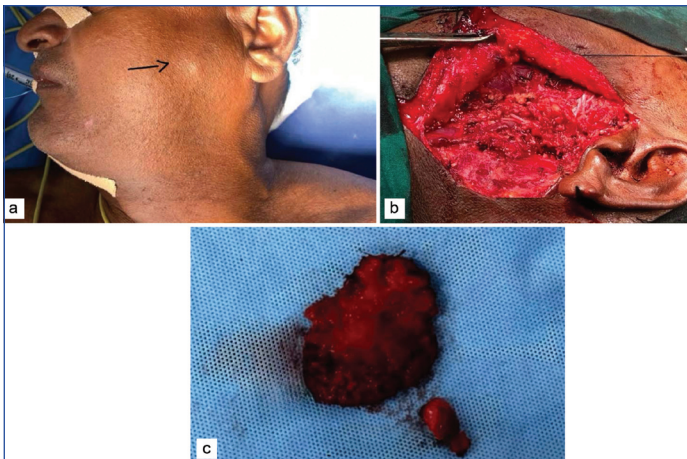
A 53-year-old male presented with a progressively enlarging left preauricular swelling of six months duration associated with intermittent dull pain and mild discomfort during mastication. There was no history of facial asymmetry, trismus, xerostomia, weight loss, fever, or prior salivary gland disease.

On clinical examination, a 4×3 cm firm, mildly tender swelling was noted over the left parotid region. The swelling was mobile in the horizontal plane with well-defined margins and no overlying skin fixation or ulceration. The ear lobule was mildly elevated. No cervical lymphadenopathy was palpable. Facial nerve examination demonstrated intact frontal, zygomatic, buccal, marginal mandibular and cervical branch function.

Contrast-Enhanced Computed Tomography (CECT) demonstrated a heterogeneously enhancing lesion measuring approximately 3.8×3.2 cm within the superficial lobe of the left parotid gland with focal cystic change but no deep lobe extension or bony erosion. FNAC was reported as Milan category IV-A, suggestive of pleomorphic adenoma.

The patient underwent superficial parotidectomy under general anaesthesia using a modified Blair incision. Skin flaps were elevated in the subplatysmal plane, and the main trunk of the facial nerve was identified at the tragal pointer and meticulously dissected. The lesion was densely adherent to the buccal branch; complete excision was achieved with sacrifice of the involved buccal branch while preserving the remaining facial nerve branches [Table/Fig-1].

Gross examination revealed a well-circumscribed nodular lesion. Histopathological examination demonstrated nodular oncocytic hyperplasia with foreign body granulomatous reaction and no evidence of malignancy.



[Table/Fig-1]: (Case 1): a) Preoperative clinical photograph showing a left-sided parotid swelling; b) Intraoperative view during superficial parotidectomy demonstrating elevation of the skin flap and identification of the facial nerve trunk and branches; c) Gross specimen showing a firm nodular mass with a smaller satellite nodule.

Postoperatively, the patient developed mild transient buccal weakness which improved significantly with physiotherapy and compensatory facial muscle adaptation over subsequent follow-up visits. No recurrence was observed after two months.

Case 2

A 65-year-old female presented with a progressively enlarging right-sided preauricular swelling associated with intermittent otalgia for one year. The patient reported recent increase in swelling size over the preceding three months. There was no history of facial weakness, trismus, dysphagia, weight loss, or prior salivary gland surgery.

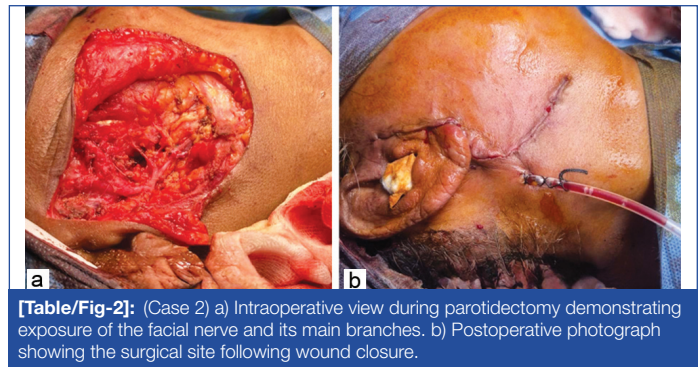
Clinical examination revealed a firm, deep-seated right parotid swelling measuring approximately 5×4 cm involving both the infra-auricular and retromandibular regions. The lesion was poorly mobile with fullness extending toward the angle of the mandible. Overlying skin was normal without ulceration or tethering. Multiple firm intraparotid and upper cervical lymph nodes were palpable. Facial nerve examination demonstrated preserved function in all branches with no evidence of paresis.

The Magnetic Resonance Imaging (MRI) demonstrated a heterogeneously enhancing lesion involving both superficial and deep lobes of the right parotid gland with ill-defined margins and extension into the parapharyngeal space. Enlarged intraparotid and level II cervical lymph nodes with central necrosis were noted, raising suspicion for malignant pathology. FNAC was categorised as Milan category V, suspicious for malignancy.

The patient underwent total conservative parotidectomy under general anaesthesia through a modified Blair incision. Subplatysmal flaps were elevated, and the main trunk of the facial nerve was identified at the stylomastoid foramen using standard anatomical landmarks. Careful antegrade facial nerve dissection was performed with preservation of all major branches. The deep lobe component was dissected free from surrounding structures, and enlarged intraparotid nodes were excised en bloc with the specimen [Table/Fig-2].

Histopathological examination revealed high-grade salivary duct carcinoma with comedonecrosis and perineural invasion. Metastatic involvement of intraparotid lymph nodes was identified, and final pathological staging was Pathological Tumour-Category 2, Node-Category 1 (pT2N1).

The postoperative course was uneventful with preserved facial nerve function. No salivary fistula, haematoma, or wound complications occurred. The patient was subsequently referred for adjuvant radiotherapy and remained under oncological follow-up for next six months.



[Table/Fig-2]: (Case 2) a) Intraoperative view during parotidectomy demonstrating exposure of the facial nerve and its main branches. b) Postoperative photograph showing the surgical site following wound closure.

Case 3

An 82-year-old male presented with a gradually enlarging painless swelling in the right preauricular region for several months. The swelling had progressively increased in size but was not associated with pain, facial asymmetry, trismus, dysphagia, weight loss, or constitutional symptoms. There was no prior history of salivary gland disease or head and neck irradiation.

On clinical examination, a well-circumscribed mobile mass measuring approximately 4×3 cm was palpable within the superficial lobe of the right parotid gland. The swelling was firm in consistency with smooth surface and well-defined margins. The overlying skin was free and pinchable with no erythema or ulceration. There was no cervical lymphadenopathy. Facial nerve examination demonstrated intact motor function in all branches without weakness.

The USG of the parotid region demonstrated a well-defined solid-cystic lesion with internal vascularity involving the superficial lobe of the right parotid gland. No calcification or adjacent soft-tissue invasion was noted. FNAC was categorised as Milan IV-B, suggestive of salivary gland neoplasm of uncertain malignant potential because of increased cellularity and atypical myoepithelial proliferation.

The patient underwent superficial parotidectomy under general anaesthesia using a modified Blair incision. Following elevation of skin flaps, the main trunk of the facial nerve was identified at the tragal pointer and meticulously dissected in an antegrade fashion. The tumour was located within the superficial lobe and was excised completely with adequate margins while preserving all facial nerve branches. Haemostasis was secured and a suction drain was placed prior to layered wound closure [Table/Fig-3].

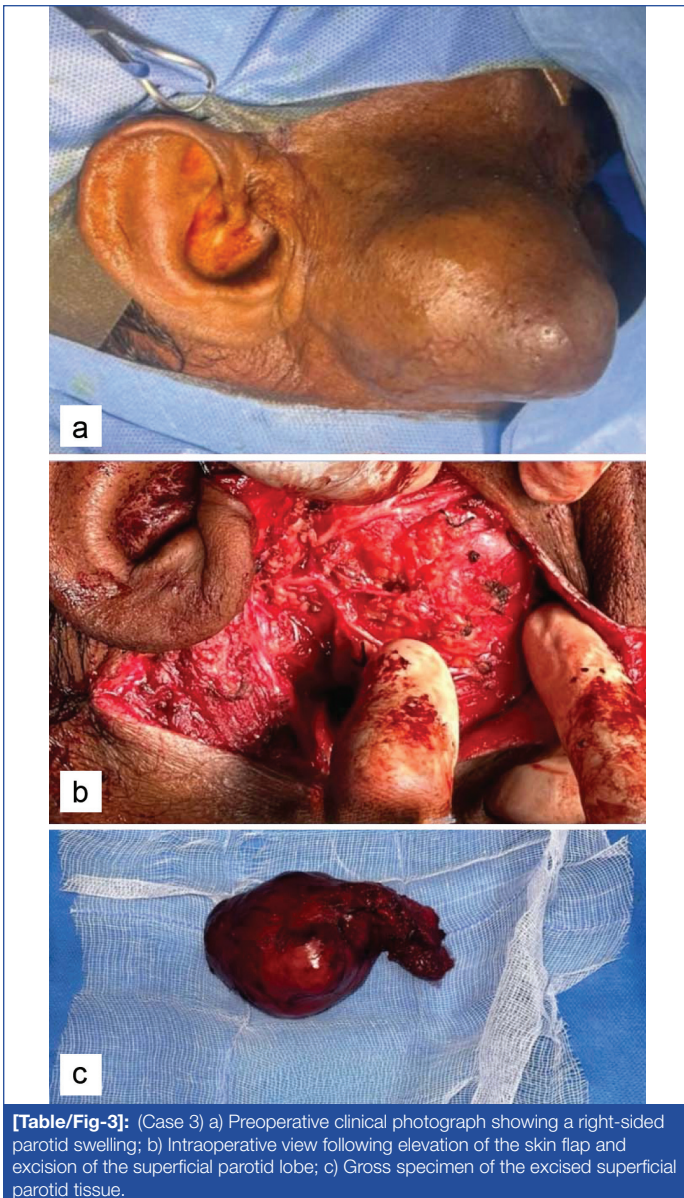
Gross pathological examination demonstrated a well-encapsulated tan-white nodular lesion with focal cystic areas. Histopathological examination revealed cellular pleomorphic adenoma composed predominantly of epithelial and myoepithelial elements within a myxochondroid stroma, without evidence of malignant transformation.

The postoperative period was uneventful. Facial nerve function remained intact, and no haematoma, salivary fistula, or wound infection occurred. The patient remained asymptomatic on follow-up with no evidence of recurrence for six months.

Case 4

A 45-year-old female presented with an incidentally detected swelling in the left preauricular region of six months duration. The swelling had shown minimal increase in size over time and was not associated with pain, facial asymmetry, trismus, xerostomia, dysphagia, or constitutional symptoms. There was no prior history of salivary gland disease or surgery.

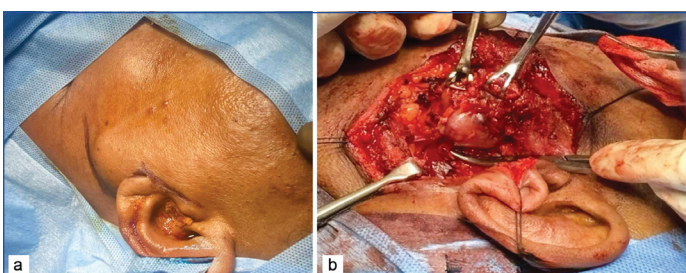
Clinical examination revealed a 2.5×2 cm well-circumscribed swelling in the superficial lobe of the left parotid gland. The lesion was firm, non tender, smooth surfaced and freely mobile over underlying structures. The overlying skin was normal without erythema, fixation, or ulceration. No cervical lymphadenopathy was palpable. Facial nerve examination demonstrated intact motor function in all branches with no evidence of weakness.



[Table/Fig-3]: (Case 3) a) Preoperative clinical photograph showing a right-sided parotid swelling; b) Intraoperative view following elevation of the skin flap and excision of the superficial parotid lobe; c) Gross specimen of the excised superficial parotid tissue.

The CECT demonstrated a well-defined homogeneously enhancing solid lesion measuring approximately 2.4×2.1 cm within the superficial lobe of the right parotid gland. There was no evidence of deep lobe extension, perineural spread, calcification, or cervical nodal enlargement. FNAC was reported as Milan category II, consistent with a benign salivary gland lesion.

The patient underwent superficial parotidectomy under general anaesthesia through a modified Blair incision. Subplatysmal skin flaps were elevated and the main trunk of the facial nerve was identified using the tragal pointer and posterior belly of digastric muscle as landmarks. Careful antegrade dissection allowed preservation of all facial nerve branches while the lesion was excised completely with surrounding cuff of normal parotid tissue. A closed suction drain was placed and the wound was closed in layers [Table/Fig-4].



[Table/Fig-4]: (Case 4) a) Preoperative clinical image showing a left parotid region swelling in a middle-aged female; b) Intraoperative view during superficial parotidectomy.

Gross examination revealed a well-encapsulated grey-white nodular lesion. Histopathological examination confirmed basal cell adenoma composed of uniform basaloid epithelial cells arranged in trabecular and tubular patterns without evidence of malignancy.

The postoperative course was uneventful. Facial nerve function remained intact, and there was no salivary fistula, haematoma, or wound infection. The patient remained asymptomatic on follow-up with satisfactory cosmetic outcome.

Case 5

A 28-year-old female presented with a slowly enlarging painless swelling in the right preauricular region for approximately eight months. The swelling had gradually increased in size without associated pain, facial weakness, fever, discharge, weight loss, or constitutional symptoms. There was no prior history of salivary gland disease, trauma, or surgery.

Clinical examination revealed a 2×1.5 cm soft, cystic, non tender swelling within the superficial lobe of the right parotid gland. The lesion was mobile with well-defined margins and smooth surface. The overlying skin appeared normal without erythema, tethering, or ulceration. No cervical lymphadenopathy was noted. Facial nerve examination demonstrated preserved motor function in all branches.

The USG demonstrated a well-defined cystic lesion with internal low-level echoes located within the superficial lobe of the right parotid gland. No significant internal vascularity, calcification, or deep lobe extension was identified. FNAC yielded scant keratinous material with benign squamoid cells and was categorised as Milan category II, favouring a benign cystic lesion with possible adipocytic component.

The patient underwent superficial parotidectomy under general anaesthesia using a modified Blair incision. After elevation of subplatysmal flaps, the main trunk of the facial nerve was identified and carefully dissected in an antegrade manner. The cystic lesion was localised within the superficial lobe and excised completely with preservation of all facial nerve branches. Haemostasis was achieved, and a suction drain was placed prior to layered closure [Table/Fig-5].

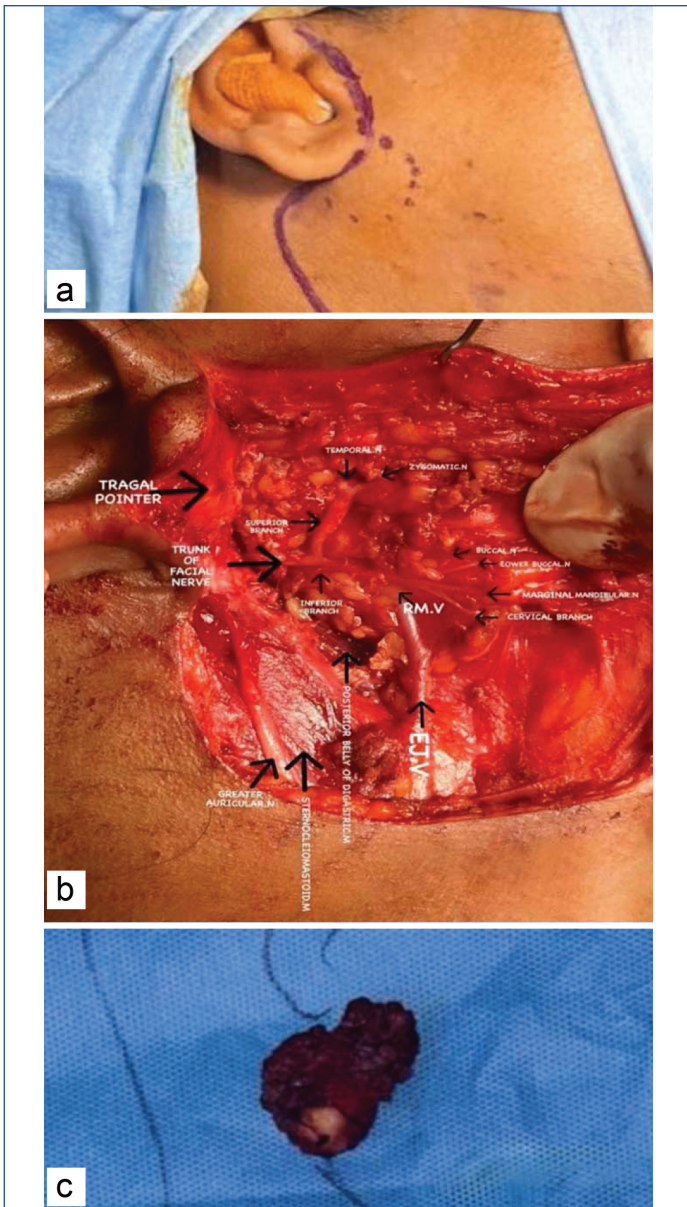
Gross pathological examination demonstrated a cystic lesion containing keratinous material. Histopathological examination revealed a keratinous lymphoepithelial cyst lined by squamous epithelium with surrounding lymphoid aggregates and no evidence of dysplasia or malignancy.

The postoperative course was uneventful. The drain was removed on postoperative day 2, and no facial nerve weakness, salivary fistula, haematoma, or wound infection occurred. At six-month follow-up, the patient remained asymptomatic with no evidence of recurrence and satisfactory cosmetic outcome.

Case 6

A 52-year-old male presented with a painless left-sided preauricular swelling of two years duration. The swelling had gradually increased in size over time without rapid enlargement. There was no history of pain, facial asymmetry, trismus, dysphagia, xerostomia, weight loss, or constitutional symptoms. The patient had no significant past medical or surgical history and no prior history of salivary gland disease or head and neck irradiation.

Clinical examination revealed a 3×2.5 cm firm, non tender, mobile swelling located within the superficial lobe of the right parotid gland. The lesion had smooth margins and was not fixed to the overlying skin or underlying structures. The overlying skin was normal without erythema or ulceration. No cervical lymphadenopathy was palpable. Facial nerve examination demonstrated intact motor function in all branches with no evidence of weakness.



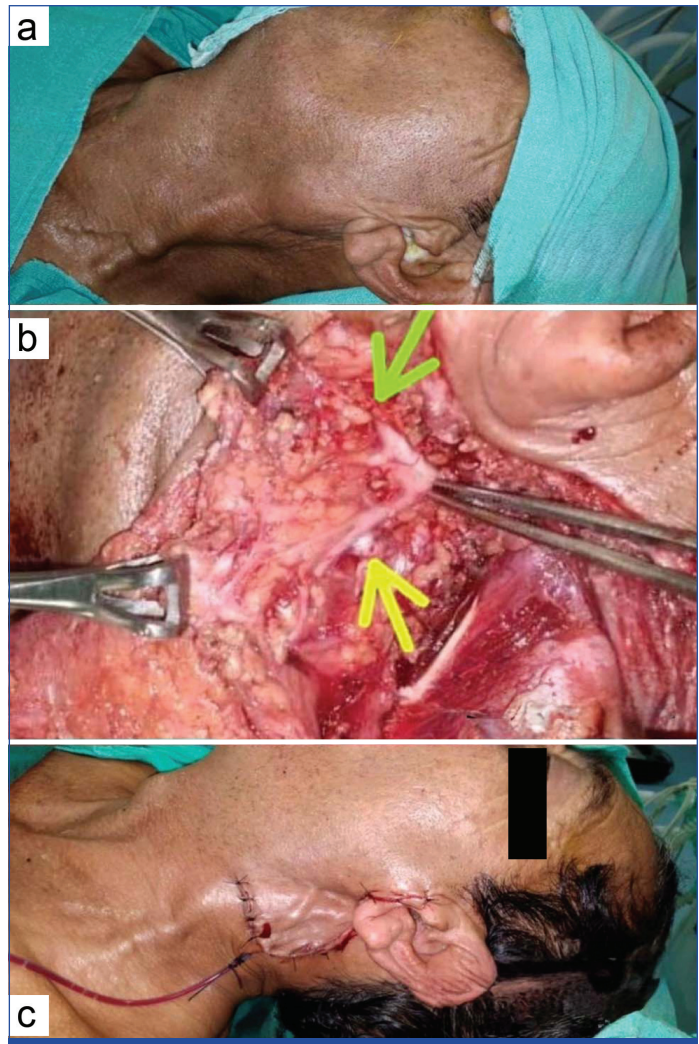
[Table/Fig-5]: (Case 5) a) Preoperative clinical photograph showing a right-sided parotid swelling; b) Intraoperative view following removal of the superficial parotid lobe with preservation of facial nerve branches; c) Gross specimen showing a well-circumscribed firm lesion.

The MRI demonstrated a well-circumscribed encapsulated lesion measuring approximately 2.8x2.4 cm within the superficial lobe of the right parotid gland. The lesion appeared homogeneous without infiltration of adjacent soft-tissues, deep lobe extension, or nodal enlargement. FNAC findings were benign and categorised as Milan category II, favouring a benign salivary gland neoplasm.

The patient underwent superficial parotidectomy under general anaesthesia using a modified Blair incision. Following elevation of skin flaps, the main trunk of the facial nerve was identified at the stylomastoid foramen and dissected carefully in an antegrade fashion. The tumour was completely excised from the superficial lobe while preserving all facial nerve branches. Haemostasis was secured, and a suction drain was placed prior to layered wound closure [Table/Fig-6].

Gross examination demonstrated a well-encapsulated grey-white nodular lesion. Histopathological examination revealed basal cell adenoma characterised by uniform basaloid epithelial cells arranged in trabecular and tubular patterns with peripheral palisading and a fibrous capsule. No atypia, perineural invasion, or malignant transformation was identified.

The postoperative period was uneventful. Facial nerve function remained intact, and no salivary fistula, haematoma, or wound complications occurred. At follow-up, the patient remained asymptomatic with no clinical evidence of recurrence.



[Table/Fig-6]: (Case 6) a) Preoperative clinical photograph showing a left-sided preauricular swelling; b) Intraoperative view demonstrating superficial parotidectomy with facial nerve preservation; c) Postoperative clinical photograph demonstrating satisfactory wound closure with drain placement and preservation of facial contour.

Case 7

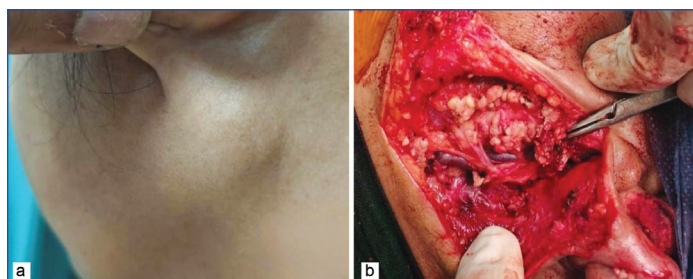
A 36-year-old female presented with a slowly enlarging swelling in the left preauricular region for approximately one year. The swelling had gradually increased in size without associated pain, facial asymmetry, trismus, dysphagia, xerostomia, or constitutional symptoms. There was no history of rapid enlargement, skin changes, or weight loss. The patient had no significant medical comorbidities, prior salivary gland disease, previous head and neck surgery, or history of radiation exposure.

On clinical examination, a 3.5x3 cm well-defined firm swelling was palpable in the superficial lobe of the left parotid gland. The lesion was non tender, mobile, and smooth surfaced with distinct margins. The swelling moved slightly with underlying parotid tissue and was not fixed to the overlying skin or deeper structures. The skin over the lesion was normal without erythema, ulceration, or tethering. No cervical lymphadenopathy was palpable. Detailed facial nerve examination demonstrated intact frontal, zygomatic, buccal, marginal mandibular and cervical branch function without weakness or asymmetry.

The MRI demonstrated a well-encapsulated T2 hyperintense lesion measuring approximately 3.2x2.8 cm within the superficial lobe of the left parotid gland. The lesion showed homogeneous contrast enhancement without deep lobe extension, perineural spread, or cervical nodal involvement. FNAC was categorised as Milan IV-A and was suggestive of pleomorphic adenoma.

The patient underwent superficial parotidectomy under general anaesthesia through a modified Blair incision. Subplatysmal skin flaps were elevated, and the main trunk of the facial nerve was

identified using the tragal pointer and posterior belly of digastric muscle as anatomical landmarks. Antegrade facial nerve dissection was meticulously performed, and the encapsulated lesion was excised completely with preservation of all facial nerve branches. A suction drain was placed prior to layered wound closure [Table/Fig-7].



[Table/Fig-7]: (Case 7) a) Preoperative clinical photograph showing a left preauricular swelling; b) Intraoperative view during superficial parotidectomy.

Gross pathological examination revealed a well-circumscribed encapsulated grey-white lesion with focal myxoid areas. Histopathological examination confirmed pleomorphic adenoma composed of epithelial and myoepithelial elements embedded in chondromyxoid stroma without evidence of malignant transformation.

The postoperative course was uneventful. Facial nerve function remained intact with no evidence of salivary fistula, haematoma, or wound infection. At follow-up, the patient demonstrated satisfactory cosmetic outcome with no clinical evidence of recurrence.

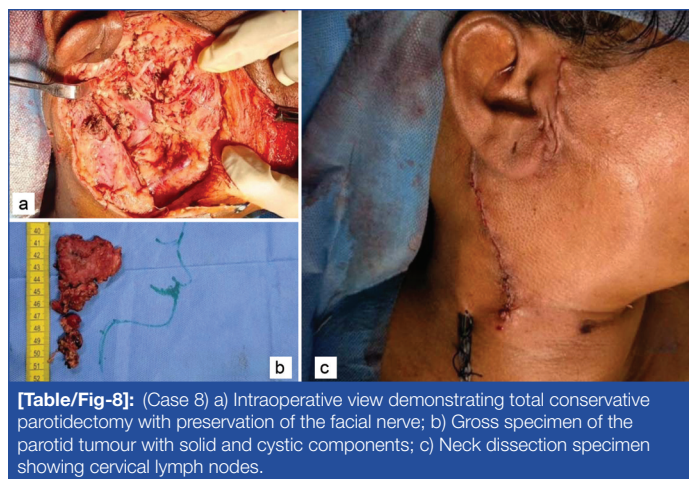
Case 8

A 65-year-old female presented with a progressively enlarging right-sided parotid swelling associated with intermittent discomfort for approximately one year. Over the preceding few months, she had noticed a gradual increase in the size of the swelling along with a sensation of fullness below the angle of the mandible. There was no history of facial weakness, trismus, dysphagia, xerostomia, weight loss, or previous salivary gland disease. Her medical history was significant for well-controlled hypertension on regular medication. There was no prior history of head and neck irradiation or surgery.

Clinical examination revealed a 5×4 cm firm swelling involving the right parotid region with fullness extending into the retromandibular area. The lesion was mildly tender on deep palpation and appeared relatively fixed compared to benign superficial lobe lesions. Deep lobe fullness was appreciable intraorally along the lateral oropharyngeal wall. Multiple palpable right upper cervical lymph nodes measuring approximately 1-1.5 cm were present in level II region. The overlying skin was normal without ulceration or tethering. Detailed facial nerve examination demonstrated preserved motor function in all branches without evidence of paresis.

The MRI demonstrated a heterogeneously enhancing lesion measuring approximately 4.8×4.2 cm involving both superficial and deep lobes of the right parotid gland. Multiple enlarged cervical lymph nodes with suspicious radiological features were noted in level II region. No skull base erosion or definite perineural intracranial extension was identified. FNAC was categorised as Milan VI, consistent with malignant salivary gland neoplasm.

The patient underwent total conservative parotidectomy with supraomohyoid neck dissection under general anaesthesia using a modified Blair incision extended into the neck. Following elevation of skin flaps, the facial nerve trunk was identified at the stylomastoid foramen and carefully dissected with preservation of all major branches. The deep lobe tumour was excised completely along with involved lymph nodes from levels I-III. Haemostasis was secured and suction drains were placed in both parotid and neck compartments before layered closure [Table/Fig-8].



[Table/Fig-8]: (Case 8) a) Intraoperative view demonstrating total conservative parotidectomy with preservation of the facial nerve; b) Gross specimen of the parotid tumour with solid and cystic components; c) Neck dissection specimen showing cervical lymph nodes.

Histopathological examination revealed low-grade mucoepidermoid carcinoma composed of mucous, intermediate, and epidermoid cells with metastatic involvement of cervical lymph nodes. Final pathological staging was pT2N1. Surgical margins were free of tumour.

The postoperative period was uneventful with preserved facial nerve function and no salivary fistula or wound complications. The patient subsequently received adjuvant radiotherapy. At six-month follow-up, she remained clinically stable with no evidence of locoregional recurrence and satisfactory functional outcome.

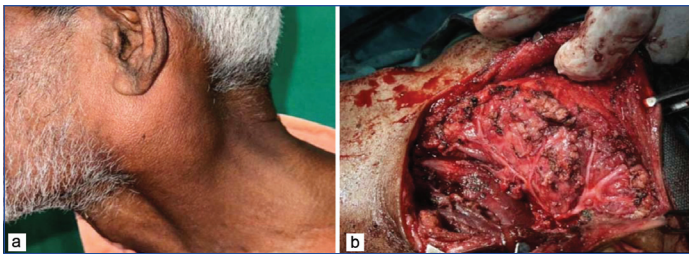
Case 9

An 85-year-old male presented with a rapidly enlarging painful swelling involving the left parotid and upper cervical region for approximately four months. The patient reported progressive increase in size associated with dull aching pain radiating toward the ipsilateral ear and neck. There was no history of trismus or dysphagia; however, the patient reported reduced appetite and mild weight loss over recent months. His medical history was significant for previously treated cutaneous squamous cell carcinoma of the left temporal scalp region excised two years earlier. He was also a known hypertensive on regular medication.

Clinical examination revealed a large irregular left parotid swelling measuring approximately 7×6 cm extending into the upper cervical region. The mass was firm to hard in consistency, tender on palpation, and poorly mobile with apparent fixation to deeper tissues. The overlying skin appeared stretched but without ulceration. Multiple enlarged firm cervical lymph nodes were palpable in levels II and III. Mild weakness of the marginal mandibular branch of the facial nerve was noted clinically, while other branches demonstrated preserved function.

The CECT demonstrated an ill-defined heterogeneously enhancing infiltrative lesion involving both superficial and deep lobes of the left parotid gland measuring approximately 6.8×5.9 cm. Areas of central necrosis and irregular margins were present with extension into adjacent subcutaneous soft-tissue. Multiple enlarged necrotic cervical lymph nodes were identified in levels II and III, the largest measuring 2.5 cm. No definite mandibular erosion was identified, although surrounding fat planes were partially obliterated. Radiological findings were highly suggestive of malignant parotid disease with nodal metastasis. FNAC was categorised as Milan VI, consistent with malignant epithelial neoplasm.

The patient underwent total parotidectomy with modified radical neck dissection under general anaesthesia through an extended modified Blair incision. Intraoperatively, the tumour was found to infiltrate adjacent soft-tissue planes with adherence to lower division branches of the facial nerve. Careful dissection was performed to preserve uninvolved facial nerve branches where feasible, while achieving complete oncological excision. Levels I-V cervical lymph nodes were dissected en bloc with the specimen [Table/Fig-9].



[Table/Fig-9]: (Case 9) a) Preoperative clinical photograph showing a large left parotid and upper neck mass; b) Intraoperative view demonstrating infiltrative parotid tumour during total parotidectomy and neck dissection.

Histopathological examination revealed metastatic cutaneous squamous cell carcinoma involving the parotid gland with metastatic cervical nodal disease. Final pathological staging was pT0N2b, consistent with metastatic nodal disease from a previously excised cutaneous primary squamous cell carcinoma. Surgical margins were free of tumour involvement.

Postoperatively, the patient developed mild transient lower facial weakness which improved gradually with physiotherapy. No salivary fistula, haematoma, or wound infection occurred. Adjuvant radiotherapy was advised, and the patient remained under regular oncological surveillance during follow-up.

Case 10

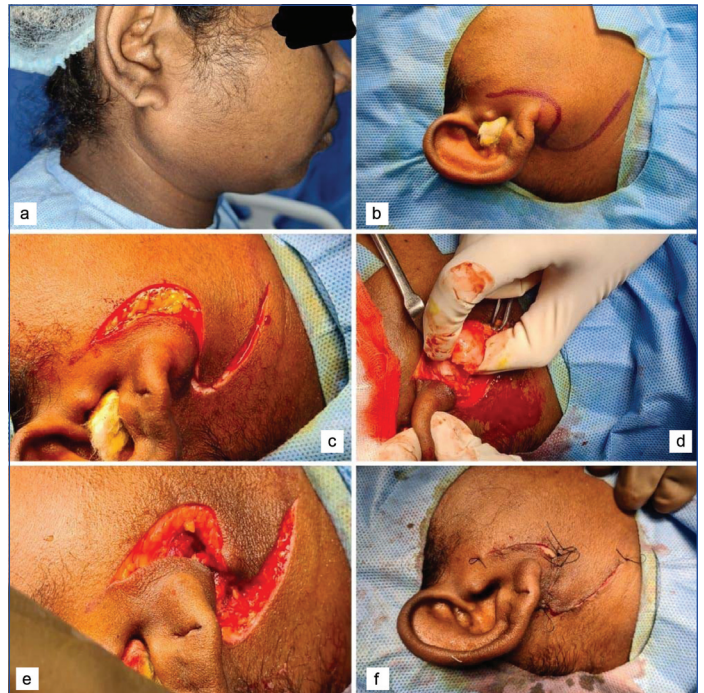
A 29-year-old female presented with a slowly enlarging painless swelling in the left preauricular region for approximately one year. The swelling had shown gradual increase in size without rapid progression. There was no associated pain, facial asymmetry, trismus, dysphagia, xerostomia, weight loss, or constitutional symptoms. The patient had no significant past medical or surgical history and no prior history of salivary gland disease, trauma, or radiation exposure.

Clinical examination revealed a 3x2.5 cm soft, non tender, well-circumscribed swelling within the superficial lobe of the left parotid gland. The lesion was freely mobile with smooth surface and distinct margins. The overlying skin was normal without erythema, ulceration, or tethering. There was no cervical lymphadenopathy. Detailed facial nerve examination demonstrated intact motor function in all branches with no evidence of weakness or asymmetry.

The MRI demonstrated a well-defined encapsulated fat-density lesion measuring approximately 2.8x2.4 cm within the superficial lobe of the left parotid gland. The lesion showed homogeneous high T1 and T2 signal intensity with suppression on fat-saturated sequences, consistent with lipomatous pathology. No deep lobe

extension, surrounding soft-tissue infiltration, or cervical nodal enlargement was identified. FNAC findings were benign and suggestive of adipocytic lesion.

The patient underwent superficial parotidectomy under general anaesthesia using a modified Blair incision. Following elevation of skin flaps, the facial nerve trunk was identified and carefully dissected in an antegrade manner. The encapsulated lesion was completely excised from the superficial lobe while preserving all facial nerve branches. A suction drain was placed and the wound was closed in layers [Table/Fig-10].



[Table/Fig-10]: (Case 10) a, b) Preoperative clinical photograph showing a left parotid swelling; c, d) Intraoperative view revealing a yellow, lobulated mass within the parotid gland; e, f) Postoperative view of preauricular regions.

Gross pathological examination revealed a well-encapsulated yellow soft-tissue lesion. Histopathological examination confirmed intraparotid lipoma composed of mature adipocytes without atypia or malignant transformation.

The postoperative course was uneventful. Facial nerve function remained intact and no salivary fistula, haematoma, or wound complications occurred. At follow-up, the patient remained asymptomatic with satisfactory cosmetic outcome and no evidence of recurrence.

Summary of all the cases is presented in [Table/Fig-11].

| Case | Age/ Sex | Side | Clinical Presentation | FNAC (Milan Category) | Imaging Findings | Surgical Procedure | Histopathological Diagnosis | Outcome |
|------|----------|-------|-------------------------------|---|--|--|---|-------------------------------------|
| 1 | 53/M | Left | Painful swelling, 6 months | IV-A (Pleomorphic adenoma) | Heterogeneous lesion (CT) | Superficial parotidectomy (buccal branch sacrificed) | Nodular oncocytic hyperplasia with foreign body granuloma | Transient facial weakness, resolved |
| 2 | 65/F | Right | Swelling with otalgia, 1 year | V (Suspicious for malignancy) | Superficial + deep lobe lesion, intraparotid node (CT/MRI) | Total conservative parotidectomy + node excision | High-grade salivary duct carcinoma (pT2N1) | Adjuvant radiotherapy |
| 3 | 82/M | Right | Large painless swelling | IV-B (SUMP) | Solid-cystic vascular lesion (USG) | Superficial parotidectomy | Cellular pleomorphic adenoma | Uneventful |
| 4 | 45/F | Left | Asymptomatic swelling | II (Benign) | Solid lesion (CT) | Superficial parotidectomy | Basal cell adenoma | Uneventful |
| 5 | 28/F | Right | Small painless swelling | II (Benign cystic lesion with squamoid/keratinous material) | Cystic lesion with internal echoes (USG) | Superficial parotidectomy | Keratinous / lymphoepithelial cyst | Uneventful |
| 6 | 52/M | Right | Painless swelling, 2 years | II (Benign) | Well-circumscribed lesion (MRI) | Superficial parotidectomy | Basal cell adenoma | Uneventful |
| 7 | 36/F | Left | Slowly enlarging swelling | IV-A (Pleomorphic adenoma) | Encapsulated lesion (MRI) | Superficial parotidectomy | Pleomorphic adenoma | Uneventful |

| | | | | | | | | |
|----|------|-------|--------------------------------|----------------|--|--|---|-----------------------|
| 8 | 65/F | Right | Swelling with discomfort | VI (Malignant) | Deep lobe lesion + nodal disease (MRI) | Total conservative parotidectomy + SONND | Low-grade mucoepidermoid carcinoma (pT2N1) | Adjuvant radiotherapy |
| 9 | 85/M | Left | Rapidly enlarging painful mass | VI (Malignant) | Infiltrative lesion + nodes (CT) | Total parotidectomy + MRND | Metastatic cutaneous squamous cell carcinoma (pTON2b) | Adjuvant radiotherapy |
| 10 | 29/F | Left | Slow-growing painless swelling | II (Benign) | Fat-density lesion (MRI) | Superficial parotidectomy | Intraparotid lipoma | Uneventful |

[Table/Fig-11]: Clinicopathological characteristics of ten patients with parotid gland swellings.

DISCUSSION

Parotid gland tumours demonstrate marked clinicopathological heterogeneity and continue to pose diagnostic and therapeutic challenges despite advances in imaging and cytopathological assessment [1,2]. In the present case series, benign tumours constituted the majority of lesions, which is consistent with previous reports indicating that nearly 70-80% of parotid neoplasms are benign in nature [1,3]. Pleomorphic adenoma was among the most commonly encountered lesions in the series, reflecting its established status as the predominant benign salivary gland tumour worldwide [3].

In addition to common benign neoplasms, the present series also included several uncommon pathological entities such as nodular oncocytic hyperplasia, keratinous lymphoepithelial cyst, basal cell adenoma, and intraparotid lipoma. These lesions are diagnostically significant because they frequently mimic other benign or malignant salivary gland tumours clinically, radiologically, and cytologically [4,5]. Nodular oncocytic hyperplasia is a rare non neoplastic lesion characterised by multifocal oncocytic proliferation and may be mistaken for oncocytoma or Warthin tumour on cytology and imaging [4]. Similarly, intraparotid lipoma represents a rare benign lesion accounting for less than 1% of parotid tumours and may pose diagnostic difficulty because of overlapping radiological features with other fat-containing lesions [6].

FNAC remains an important component of preoperative evaluation for salivary gland tumours. The adoption of the Milan System for Reporting Salivary Gland Cytopathology has improved standardisation and risk stratification of salivary gland lesions [7]. In the present series, FNAC demonstrated good concordance with final histopathology, particularly in malignant lesions such as salivary duct carcinoma and mucoepidermoid carcinoma. However, diagnostic discordance was encountered in oncocytic and cystic lesions, which is well recognised in the literature [5,7]. Schmidt RL et al., demonstrated that although FNAC has high specificity for parotid malignancy, sensitivity may vary considerably depending on tumour subtype and cystic degeneration [8].

Cross-sectional imaging played an important role in defining lesion extent, deep lobe involvement, nodal disease, and surgical planning. MRI was particularly useful in evaluating deep lobe tumours and parapharyngeal extension, while CT aided assessment of infiltrative disease and cervical nodal metastasis. Nevertheless, imaging findings often overlap between benign and malignant lesions, limiting definitive preoperative diagnosis [2,9]. Similar observations were reported by Christe A et al., who emphasised that radiological features alone are insufficient for reliable differentiation of benign and malignant parotid tumours [9].

Malignant tumours in the present series included salivary duct carcinoma, mucoepidermoid carcinoma, and metastatic cutaneous squamous cell carcinoma involving the parotid gland. Salivary duct carcinoma is an aggressive high-grade malignancy frequently associated with perineural invasion, nodal metastasis, and poor prognosis [10]. One of the patients in this case series demonstrated nodal disease at presentation, necessitating total conservative parotidectomy with nodal clearance followed by adjuvant radiotherapy. Similarly, metastatic cutaneous squamous cell carcinoma involving intraparotid lymph nodes represents an

aggressive disease process commonly seen in elderly patients with prior cutaneous malignancies [11]. Early recognition and comprehensive surgical management with neck dissection are critical for disease control.

Surgical excision remains the cornerstone of management for both benign and malignant parotid tumours [2]. Superficial parotidectomy was adequate for benign superficial lobe lesions in our series, whereas total conservative parotidectomy with neck dissection was required for malignant tumours with deep lobe involvement or nodal metastasis. Preservation of facial nerve function remains a major surgical priority during parotid surgery [2,11]. In the present series, transient postoperative facial weakness occurred in selected patients, particularly in cases requiring difficult dissection or sacrifice of adherent peripheral branches; however, no permanent facial nerve palsy was encountered.

Several previously published case reports and series have similarly highlighted the broad clinicopathological diversity of parotid tumours and the challenges associated with preoperative diagnosis [7]. Castrodad-Rodríguez CA et al., reported diagnostic limitations of FNAC in oncocytic and cystic salivary gland lesions despite application of the Milan System [7]. Bron LP and O'Brien CJ emphasised that meticulous surgical dissection and intraoperative identification of the facial nerve significantly reduce long-term functional morbidity following parotidectomy [11]. The findings of the present series are consistent with these observations and further reinforce the importance of integrating clinical examination, imaging, cytology, intraoperative findings, and histopathology for individualised patient management.

CONCLUSION(S)

Parotid gland tumours encompass a broad spectrum of benign and malignant lesions with overlapping clinical and radiological features. Accurate diagnosis requires careful correlation of clinical examination, imaging, FNAC, and histopathology. Surgical management tailored to lesion extent and pathology can achieve favourable oncological and functional outcomes while preserving facial nerve function. This case series highlights the diagnostic challenges and clinicopathological diversity encountered in parotid gland tumours.

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PARTICULARS OF CONTRIBUTORS:

1. Junior Resident, Department of General Surgery, Sree Balaji Medical College and Hospital, Chennai, Tamil Nadu, India. **ORCID ID: 0009-0003-3926-0547.**
2. Assistant Professor, Department of General Surgery, Sree Balaji Medical College and Hospital, Chennai, Tamil Nadu, India. **ORCID ID: 0009-0008-1103-9185.**
3. Professor, Department of General Surgery, Sree Balaji Medical College and Hospital, Chennai, Tamil Nadu, India. **ORCID ID: 0000-0001-8762-6847.**
4. Professor, Department of General Surgery, Sree Balaji Medical College and Hospital, Chennai, Tamil Nadu, India. **ORCID ID: 0000-0001-6623-6751.**

NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Preethika Murugesan,
Junior Resident, Department of General Surgery, Sree Balaji Medical College and Hospital, Chennai-600044, Tamil Nadu, India.
E-mail: preethikamapkg@gmail.com

PLAGIARISM CHECKING METHODS: [Jain H et al.]

- Plagiarism X-checker: Apr 01, 2026
- Manual Googling: May 09, 2026
- iThenticate Software: May 12, 2026 (5%)

ETYMOLOGY: Author Origin**EMENDATIONS:** 7**AUTHOR DECLARATION:**

- Financial or Other Competing Interests: None
- Was informed consent obtained from the subjects involved in the study? Yes
- For any images presented appropriate consent has been obtained from the subjects. Yes

Date of Submission: **Mar 25, 2026**Date of Peer Review: **Apr 23, 2026**Date of Acceptance: **May 14, 2026**Date of Publishing: **Aug 01, 2026**