

# A Huge Pleomorphic Adenoma of Parotid Gland: A Case Report

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**Abstract:** Salivary gland neoplasms account for less than 3% of all head and neck tumors, making them comparatively uncommon. Seventy to eighty percent of benign salivary gland tumors are Pleomorphic adenomas (PAs), the most prevalent subtype of benign salivary gland neoplasia. A case of 63 year old patient with a huge pleomorphic adenoma of parotid gland who underwent a successful surgical excision is being reported in this case report concluding Pleomorphic adenoma is a benign tumor that grows slowly. It can develop into a large mass that causes problems if untreated. The likelihood of a malignant transformation increases with the duration of the pleomorphic adenoma. Given the high recurrence rate of these lesions, surgical resection of the lesion is the recommended course of treatment. Similar to how the surgeon will always choose the approach, which will also depend on size and location, it is advised to use conservative methods without sacrificing the patient's aesthetics and to promptly restore function.

**Keywords:** Parotid gland, Pleomorphic Adenoma, ENT disease, benign

## 1. Introduction

Salivary gland neoplasms account for less than 3% of all head and neck tumors, making them comparatively uncommon. Seventy to eighty percent of benign salivary gland tumors are Pleomorphic adenomas (PAs), the most prevalent subtype of benign salivary gland neoplasia.<sup>[1]</sup> Women between the ages of 40 and 50 are the ones who experience this the most.<sup>[2]</sup> Although PAs develop slowly most of the time, they can occasionally become aggressive and expand quickly. Untreated PA can get to several centimetres in diameter and weigh several kilograms. Massive parotid gland PA frequently takes the shape of an uneven, lumpy, painless mass that strains the skin over it. About 80% of all PA form in the parotid gland, which is often located at the superficial lobe's lower pole.<sup>[3]</sup>

A few of these long-standing tumors may develop into malignant growths. A rapid increase in the tumor's size and local indicators of malignancy such as discomfort, ulceration, spontaneous bleeding, and deep tissue invasion are typically indicators of malignant alterations.<sup>[4]</sup> The best course of action for these kinds of lesions is surgical excision because it is determined by their size and location. When treating PA that is located in the superficial lobe of the parotid gland, a number of authors report partial parotidectomy with detection and preservation of the facial nerve.<sup>[5, 6, 7]</sup> Conversely, malignancies located in the deep lobe require a complete parotidectomy.<sup>[6, 8]</sup> Here, a case of a large pleomorphic adenoma of parotid gland is reported. The patient's carelessness or fear of surgery is typically the cause of the tumor's enormous growth.

## 2. Case Report

A 63-year-old patient presented to the Otorhinolaryngology outpatient department due to a big tumor on left side of the neck (Fig. 1).



**Figure 1:** Clinical photograph of Parotid swelling measuring 15 cm x 12.6 cm x 7 cm, multinodular with stretched skin and dilated superficial veins

Over the course of more than 20 years, the painless swelling had progressively grown larger without producing any discomfort. The parotid mass's dimensions at the moment of presentation were 15 cm x 12.6 cm x 7 cm. Due to low socioeconomic status and anxiety about the surgery, the patient did not see any doctor for years. Upon examination, the swelling was found to be multi-nodular, firm, and movable with no fixation to the surrounding structures. There was no indication of facial nerve paralysis, despite the mass's huge size. At that time, the patient did not have any symptoms of weight loss, fever, chills, dysphagia, hoarseness, or rupture of the mass. Veins were dilated and the skin stretched around the bulk. There was no cervical lymphadenopathy. Features of the fine needle aspiration cytology (FNAC) were suggestive of pleomorphic adenoma. A computed tomography (CT) scan was performed to determine the mass's extent. The tumor was joined to the parotid gland's superficial lobe. Under general anesthesia, the patient had a superficial parotidectomy with facial nerve preservation. Post-operatively, the patient recovered well and was followed up until 1 year of surgery with no recurrence.

### 3. Discussion

The most prevalent salivary gland neoplasms to date are pleomorphic adenomas (PAs), commonly referred to as "benign mixed tumors" and initially described by Billroth in 1859.<sup>[9]</sup> PAs are purely epithelial in origin, with ductal and pluripotent myoepithelial cells. Despite their remarkable morphological diversity, they are not true "mixed tumors" originating from more than one germ layer. Worldwide, the yearly incidence rate of PAs is between 2.4 and 3.05 per 100,000 people.<sup>[10]</sup> The tumor in our patient had grown to be a large tumor and had spread from the parotid gland to the submandibular region, along with subcutaneous loose tissue.

Core needle biopsy and fine needle aspiration cytology guided by ultrasound (US) are rapid, safe techniques for the preoperative diagnosis of superficial masses. The cytological diagnosis's sensitivity and specificity were 92.6 and 98.4%, respectively, in a study involving 212 PA patients.<sup>[11]</sup> Magnetic resonance imaging (MRI) and computed tomography (CT) are frequently used imaging modalities to ascertain the status of surrounding lymph nodes, the impact of a mass on adjacent structures, and the spatial location of the mass in the neck. Although they are not specific to the tumor, some CT characteristics, such as lobulation, homogeneity, and delayed enhancement, can point toward the diagnosis of a PA.

The accepted standard of care is believed to be surgical removal of the nodule and the afflicted gland.<sup>[12]</sup> Many surgeons prefer partial gland resection for parotid PA in order to protect the facial nerve.<sup>[13]</sup> There isn't currently a recognized chemotherapy schedule for treating PAs or recurrent PAs. Actually, there is still debate regarding radiation therapy for PA because, while it may make corrective surgery more difficult, there is a chance that patients, particularly those who are younger, may develop secondary radiation neoplasms.<sup>[14]</sup> Adjuvant radiation therapy is beneficial in lowering the recurrence rate of recurrent PAs in patients with unfavorable prognosis factors, such as multinodular recurrence, according to a systematic review.<sup>[15]</sup> It is advised to use it cautiously in patients who are at high risk of experiencing another recurrence, though, because there is a lack of prospective evidence.

### 4. Conclusion

Pleomorphic adenoma is a benign tumor that grows slowly. It can develop into a large mass that causes problems if untreated. The likelihood of a malignant transformation increases with the duration of the pleomorphic adenoma. Given the high recurrence rate of these lesions, surgical resection of the lesion is the recommended course of treatment. Similar to how the surgeon will always choose the approach, which will also depend on size and location, it is advised to use conservative methods without sacrificing the patient's aesthetics and to promptly restore function.

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