

## Simultaneous primary pleomorphic adenoma in parotid gland and minor salivary gland in the parapharyngeal space

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### Abstract

The majority of salivary gland tumours present as a single mass in one gland. Sometimes multiple primary neoplasms can be seen in more than one salivary gland. The most common tumour is Warthin's tumour. Multiple primary pleomorphic adenomas are extremely rare. Most of them are in the major salivary glands. The author reports the first case of simultaneous pleomorphic adenomas in the parotid gland and minor salivary gland at the parapharyngeal space.

**Key words:** Salivary Gland Neoplasms

### Introduction

Multiple primary neoplasms are uncommon in the salivary glands. Turnbull and Frazell<sup>1</sup> reported an incidence of only 1.8 per cent, the most common pathologic types being Warthin's tumour. The occurrence of multiple primary pleomorphic adenomas of the salivary gland is rare. Bilateral parotid pleomorphic adenomas are the most common and tumours in the parotid and submandibular gland are the next most common. Tumours in the major and minor salivary glands are extremely unusual. The author presents a case of pleomorphic adenomas occurring simultaneously in the parotid gland and minor salivary gland in the parapharyngeal space.

### Case report

A 64-year-old woman presented with a two-year history of a painless lump in the right infra-auricular area. The lump had slowly increased in size and was not associated with any other symptoms. There was no preceding history of trauma or of an upper respiratory tract infection. She had been treated for pulmonary tuberculosis 30 years previously. Physical examination revealed a healthy patient with a 3 × 2 cm, firm non-tender and movable lump just inferior to the right auricle. Her facial expression was good. The oropharynx and larynx were both normal. Computed tomography (CT) scan was arranged. This showed a 2 × 2 cm mass on the right parotid gland. The parotid mass was well-circumscribed and had peripheral rim enhancement with central low density. In addition to the parotid mass, a walnut-sized distinctive parapharyngeal mass was noted on CT. The parapharyngeal mass showed homogenous soft tissue attenuation. There was no enhancement in the parapharyngeal mass. The parapharyngeal fat planes were well preserved, and there was no abnormal lymph node enlargement (Figure 1). Fine needle aspiration biopsy (FNAB) was performed on the parotid mass. It showed the possibility of a pleomorphic adenoma.



FIG. 1

Axial CT scan showing mass in the right parotid gland and parapharyngeal space.

It was difficult to assess the parapharyngeal mass with the needle due to the parotid gland mass. Thus magnetic resonance imaging (MRI) was performed. It revealed that the parotid mass was cystic with peripheral rim enhancement. The parapharyngeal mass was solid without enhancement (Figure 2). Other routine laboratory test results were normal.

At surgery, total parotidectomy was carried out with preservation of the facial nerve. The parotid mass was removed together with a superficial portion of the parotid



FIG. 2

Axial MRI revealed a right parotid mass and a parapharyngeal space mass.

gland. The deep lobe of the parotid gland was resected to access the parapharyngeal space. With the mandible retracted anteriorly, the parapharyngeal mass was noted and removed by finger dissection (Figure 3). After the operation, a mild facial weakness developed (House Brackman Grade II). The patient was discharged without any other problem on the sixth post-operative day. In histopathology, parotid mass was found to be composed of epithelial and myoepithelial cells with hyalized stroma. It was diagnosed as pleomorphic adenoma, cellular type. The parapharyngeal mass consisted of a few epithelial components with myxochondroid stroma. It was confirmed as pleomorphic adenoma, myxoid type. In the two-year clinical follow-up, there was no evidence of facial weakness nor tumour recurrence.

### Discussion

The majority of salivary gland tumours present as a single mass in only one gland. Patients with multiple primary salivary tumours in two or more glands are rarely seen. The incidence of these patients was only 1.8 per cent in the largest reports.<sup>1</sup> The most common of them were Warthin tumours, which made up 85 per cent of bilateral parotid tumours.<sup>2</sup> Thus, multiple primary pleomorphic adenoma of the salivary glands is rare. The parotid gland (82 per cent) or submandibular glands (11 per cent) are the most prevalent locations.<sup>3</sup> Multiple primary pleomorphic adenomas in both the major and minor salivary glands are found rarely. Only intermittent cases have been reported. Salahuddin<sup>4</sup> reported pleomorphic adenomas in the submandibular gland and buccal mucosa. Kuhn<sup>5</sup> reported pleomorphic adenomas arising in the nasal septum and parotid gland.

In this case, tumours were simultaneously found in the parotid gland and minor salivary gland at the parapharyngeal space. The parapharyngeal space is an uncommon

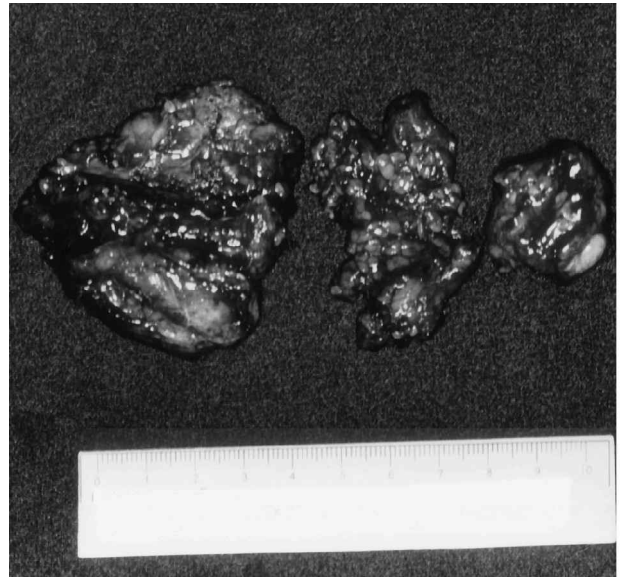


FIG. 3

Surgical specimens showing superficial lobe (right) and deep lobe (middle) of parotid gland and parapharyngeal mass (left).

site for all head and neck tumours, less than one per cent of all cases.<sup>6</sup> This is the first case report of simultaneous multiple primary pleomorphic adenomas to be seen in the parotid gland and minor salivary gland at the parapharyngeal space.

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