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Case Report

## A Case of Pleomorphic Adenoma Arising in the Palato-Pharyngeal Arch

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### Abstract

We experienced a case of pleomorphic adenoma arising in the palato-pharyngeal arch.

The patient was a 77-year-old Japanese man. He was examined by endoscopy for gastritis at a clinic, where an oropharyngeal mass was discovered. Although the tumor occupied most of the oropharynx, the patient had no complaints such as dyspnea, dysarthria or dysphagia. Our therapy for this elderly patient was a safe and minimally invasive surgery using an oral approach.

Keywords: Pleomorphic Adenoma; Palato-Pharyngeal Arch; Oral Approach; Oropharynx

### Introduction

Pleomorphic adenomas are in many cases benign tumors arising in both the major and minor salivary glands [1]. Beil [2] described that more than 90% of all oral and oropharyngeal tumors were squamous cell carcinoma, and about 10 % were benign. Eveson [3] reported that the most common benign tumors of the minor (oropharyngeal) salivary glands in the files of the British Salivary Gland Tumour Panel were pleomorphic adenomas, and the principal sites were the palate (47.0%), lips (43.7%) and buccal mucosa (36.85%) (143 cases). A histologic study of 426 oral minor salivary gland tumors by Waldron [4] demonstrated that the palate was the most common site for minor salivary gland tumors, followed by the upper lip and the buccal mucosa. These three sites accounted for 76.1% of all cases. Pleomorphic adenoma was the most common benign tumor (41% of all cases and 71% of benign). However,

no international journal has reported pleomorphic adenoma arising in the minor salivary glands at the palato-pharyngeal arch. We experienced an exceedingly rare case of pleomorphic adenoma arising in the minor salivary glands at the palato-pharyngeal arch, and present the clinical findings, imaging and operation of this case.

### Case Report and Discussion

The patient was a 77-year-old Japanese man. He underwent digestive endoscopy for gastritis in a clinic, during which an oropharyngeal mass was discovered. He was therefore referred to our hospital. In the clinical findings and MRI, a mass with a milky, smooth surface that was elastic and hard was found occupying most of the oropharynx but was not close to main vessels and nerves such as the internal carotid artery, internal jugular vein, vagus nerve and sympathetic nerve (Figure 1). He

felt only mild swallowing discomfort, but had no complaint of dyspnea, dysarthria or dysphagia.



**Figure 1.** Oral findings (Left) and MRI (Middle axial, Right Coronal) showed a mass occupying most of the oropharynx.

The results of the biopsy of the mass showed inflammatory changes but no tumor findings. We were able to transorally resect the mass under general anesthesia (Figure 2).



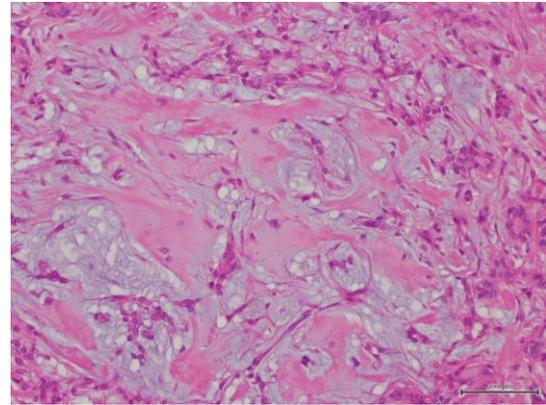
**Figure 2.** This mass could be removed safely using a less invasive surgery with an oral approach.

The operation time and bleeding volume were 5 minutes and 10cc. In the operative findings, the site from which this mass arose conformed with the palato-pharyngeal arch. The specimen, an intact capsule, was 4cm in length (Figure 3).



**Figure 3.** The specimen, an intact capsule, was 4 cm in length and had a smooth, milky surface that was elastic and hard.

The histopathological diagnosis was pleomorphic adenoma (Figure 4). To the best of our knowledge, such a case of pleomorphic adenoma arising in the palato-pharyngeal arch, has not been reported in international journals.



**Figure 4.** In the histopathologic findings of the specimen, pleomorphic adenoma showed duct cells with acidic plasma and interstitial myxedema. (H&E staining).

It has been known that the treatment of choice for pleomorphic adenomas is surgical removal with safety margins to prevent recurrence [5,6]. For pleomorphic adenomas in the parapharyngeal space that are close to main vessels and nerves, a cervical approach for surgery is often selected. In our case, the pleomorphic adenoma arising in the palato-pharyngeal arch could be preoperatively confirmed as a tumor that included a safety margin that was not close to main vessels and nerves by visual palpation and imaging examination. Our patient was elderly (77-year-old). For the above reasons, we selected minimally invasive transoral resection. Actually, the transoral resection in our case could be safely performed in a short time and with little bleeding (5 minutes and 10cc, respectively). There has been no recurrence during the 2 years since operation.

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