

ORAL SURGERY

AN UNUSUAL PRESENTATION OF PALATAL PLEOMORPHIC ADENOMA

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ABSTRACT

An unusual presentation of primary palatal pleomorphic adenoma in a 30-year-old Nigerian woman, extending through the parapharyngeal space to the submandibular space, simulating concurrent primary lesions from both the palate and submandibular gland lesion is presented. The surgical challenge arising from the extension into the parapharyngeal and submandibular space is also highlighted.

Key words: Unusual presentation, palatal pleomorphic adenoma, surgical challenge.

INTRODUCTION

Pleomorphic adenoma is the most common benign tumour affecting the minor salivary glands and the palate is the most affected site^{1,2}. It accounts for 90% of salivary gland tumors². Although, the uniform characteristic of pleomorphic adenoma is its slow growth², however, the tumour can reach a considerable size if treatment is not sought on time.

Giant pleomorphic adenomas of the palate involving parapharyngeal space (PPS), often causing airway obstruction have been reported^{3,4}. A Medline literature search did not reveal any reported case of pleomorphic adenoma originating from the palate, extending through parapharyngeal space to the submandibular.

We, therefore present a rare case of palatal pleomorphic adenoma simulating concurrent primary lesions from both the palate and submandibular gland. The surgical challenge due to the extension into PPS and submandibular space is also highlighted.

CASE REPORT

A 30-year old Nigerian woman presented in July 2003 with a slow growing intraoral tumour of 15 years duration with history of difficulty in swallowing. No other associated constitutional symptoms were reported. Past medical history revealed that the patient had refused surgical excision of the tumour, which was diagnosed as pleomorphic adenoma 5 years earlier due to financial reason. Patient came for surgical removal of the tumour because her facial appearance was increasingly been affected. Clinical examination revealed a firm non-tender mass in the left submandibular region (Fig. 1a). The overlying skin appeared clinically normal. Intra-oral examination revealed a rubbery non-tender, sessile mass originating from the soft palate, but projecting anteriorly to cover the hard palate. The posterior third of the tongue as well as the oropharynx were completely covered by the lesion (Fig. 1b). A provisional clinical diagnosis of pleomorphic adenoma or Warthin's tumour involving the palate and left submandibular gland was made.

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Jaw x-rays showed no bone pathology. CT scan could not be done because the patient could not afford the cost. Other investigations which included chest x-rays and full haematological parameters also showed no abnormalities.

The patient was subsequently admitted for surgical excision of the lesion under general anaesthesia. Tracheostomy preceded proper surgery. Intraorally, an incision was made around the base of the tumour as far posteriorly as possible. This was found insufficient to deliver the tumour because of poor access to the PPS and submandibular extension. The parapharyngeal/submandibular extension was approached through a left submandibular incision. The submandibular flap was dissected following the plane beneath the platysma. The marginal mandibular branch of facial nerve was isolated and preserved. The facial artery and vein were identified, ligated and divided. The submandibular gland was completely excised (Fig. 2a), to gain access to the tumour. With the introduction of a gloved finger medial to the medial pterygoid muscle; the tumour was completely dissected and delivered en bloc through the oral cavity. The patient was transfused with two (2) pints of whole blood intra-operatively. Haemostasis was achieved, suturing of submandibular incision was done in layers and a corrugated rubber drain was placed. An intraoral haemostatic gauze pack was placed for 48 hours. Recovery and immediate post-operative period were uneventful. The tumor consisted of a multilobulated mass measuring 8cm x 6cm x 5cm (Fig. 2b). Histopathological reports confirmed pleomorphic adenoma (Fig. 3).

DISCUSSION

Pleomorphic adenoma arising from minor salivary glands of the palate is not uncommon. Although the lesion is slow growth in characteristic, a considerable size can be attained if treatment is not sought on time^{3,4}. Although, cases of giant pleomorphic adenomas have been reported, our patient represents the first case of pleomorphic adenoma arising primarily from the palate extending through parapharyngeal space to the submandibular region. The approach to surgical excision of tumours arising from the palate is usually intraoral. However, intraoral approach was not sufficient in our patient because of extension through the left parapharyngeal space (PPS) to the left subman-

dibular space; hence an additional approach to gain access to both the PPS and submandibular space was needed for complete excision of the lesion.

The parapharyngeal space is a complex anatomic region located between the mandibular ramus and the lateral pharynx and extending as an inverted pyramid from the skull base superiorly to the hyoid bone inferiorly⁵. Within this potential space are cranial nerves IX, X, XI, the sympathetic chain, the carotid artery, the jugular vein and lymph nodes. Due to the PPS's anatomic complexity, location and surrounding vital structures, resection of tumours from this space can prove challenging to the head and neck surgeon. Various surgical approaches that have been described are: cervical, parotid cervical, transparotid, transoral, cervical-transpharyngeal and infratemporal fossa approaches⁶.

The approach of choice to the parapharyngeal space to allow adequate removal of the tumor should meet two criteria: wide intra-operative visibility for safe radical dissection and minimal functional or cosmetic after-effects⁷. The presence of rigid bony vertical ramus of the mandible which forms the lateral wall of the parapharyngeal space prevents direct surgical access to this region⁷. So a considerable number of surgical techniques have been described to overcome this problem: one involves anterior dislocation of the mandible by division of stylomandibular ligament and forward traction of the mandible⁸, and the second involves mandibular osteotomies⁹⁻¹¹. Types of mandibulotomy that have been described are: median mandibulotomy, parasymphiseal osteotomy, horizontal osteotomy, inverted "L" osteotomy and double mandibular osteotomy with coronoidectomy; with or without splitting the lip^{7,9,10}.

In this patient, a submandibular approach was performed to gain access to both the submandibular and parapharyngeal spaces. The use of sharp dissection was avoided to prevent injury to the great vessels and cervical nerves. Although, the visibility and access to the parapharyngeal space was poor with this approach, the tumor was easily mobilized with blunt dissection, without any complication. Our approach to the PPS is similar to the transcervical approach with the removal of normal submandibular gland to gain access to the PPS by Malone et al⁵. This approach obviated the need



Fig 1a. A 32-year old female with left submandibular swelling due to extension of palatal tumour through the parapharyngeal space to the submandibular region.



Fig 1b. Same patient as in (1a). The tumour completely occludes the oropharynx, most part of hard palate and also depresses the tongue.

for the use of osteotomy technique, as well as avoided the development of permanent nerve injury to inferior alveolar nerve which does occur in some osteotomy techniques posterior to the mental foramen^{12,13}. The approach also avoided scarring and other cosmetics after-effects that could have resulted from lip-splitting method.

Although, the submandibular approach was found sufficient to gain access to both the submandibular and parapharyngeal extension of the tumour in the current case, some authors have expressed concern about



Fig 2a. The left submandibular gland excised to gain access to the parapharyngeal space for complete excision of the tumour.



Fig 2b. The tumour consisting of a multilobulated mass measuring 8cm x 6cm x 5cm.



Fig 3. Photomicrograph shows chondroid tissue (lower right corner), neoplastic epithelial/ myoepithelial cells, and ductlike structures (Haematoxylin and eosin x 400).

limited exposure, need for finger dissection, and poor vascular control at the skull base with this approach'. If the need had arisen intra-operatively, we could have equally opted for one of the many techniques to gain wider access to the tumor in the parapharyngeal space.

Although, there was no evidence (clinical and histological) to suggest malignant transformation of the tumour in this case, the patient is still being reviewed on regular basis. This is due to the fact that the frequency of malignancy increases as a result of the tumour persisting without being treated following the onset of adenoma".

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