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Case Report

A Giant Parapharyngeal Space Carcinoma Ex-Pleomorphic Adenoma: A Case Report

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Abstract

Parapharyngeal space tumor has been known to be uncommon. It accounts only about 0.5% of head and neck neoplasm. Most of the lesions are benign in nature and salivary gland neoplasm being the most common. A 32-year old Malay gentleman presented with long-standing parapharyngeal mass which medialized the lateral pharyngeal wall. Biopsy was taken intraorally by soft palate mucosal incision revealed carcinoma ex-pleomorphic adenoma and transcervical approach successfully removed the mass in total. Post-operative radiotherapy was commenced and patient is well until recent follow up. Despite of the rarity of pleomorphic adenoma in parapharyngeal space, it should be among the differential diagnosis and a complete removal should be the aim as malignant transformation is possible in this type of pathology. Computed tomography scan extending from base of skull till upper thorax are important in planning the approach for complete removal of the mass followed by radiotherapy in malignant transformation cases.

Keywords: Parapharyngeal space mass, carcinoma ex-pleomorphic adenoma, transcervical approach
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Introduction

Parapharyngeal space tumor has been known to be uncommon. It accounts only about 0.5% of head and neck neoplasm. Most of the lesions are benign in nature and salivary gland neoplasm being the most common (40%) followed by paraganglioma (20%), neurogenic tumors (14%), malignant salivary tumors (13%), miscellaneous malignant tumors (7%) and miscellaneous benign tumours (6%).[1] Due to its rarity, it poses a challenge not only to diagnose, but also to select the ideal approach for complete resection and to keep the morbidity to its minimum.

We report a case of a 32-year old Malay gentleman presented with a giant parapharyngeal space carcinoma ex-pleomorphic adenoma. Because of its huge size, a thorough surgical plan has been outlined in order to safeguard the important structures and ultimately to ensure complete resection. Patient eventually underwent transcervical approach where tumor was completely dissected and patient recovered well. We feel that exploring the surgical approaches might help in managing similar cases in the future thus minimizing recurrence and morbidity rate.

Case Report

A 32 year old Malay gentleman with 12-year history of a slowly enlarging right pharyngeal swelling. He reported to have change in voice and loud snoring however no apnea episodes. Physical examination revealed he has muffled voice and a palpable non tender diffused right neck mass at level Ib and level II. No cervical lymphadenopathy palpable. Oropharyngeal examination revealed palpable large non tender swelling of right soft palate crossed the midline and pushing the uvula to the opposite side (Fig. 1). Intraoral incisional biopsy at soft palate was carried out and histopathological examination revealed pleomorphic adenoma.

Computed tomography (CT) scan showed a large well-defined heterogenous mass at the parapharyngeal region measuring 5.0cm x 7.3cm x 9.2cm (Fig 2) without any involvement of parotid gland. He underwent excision of the right parapharyngeal mass via transcervical approach, a single mass weighing 30g was found measuring 12cm x 5cm x 2cm (Fig.3,4) resulting in a complete amelioration of the patient's symptoms. The patient remains symptom-free at 3 months and currently doing well. (Fig.5)

The finalized histopathological analysis of the tumor revealed a non-invasive carcinoma ex-pleomorphic adenoma

Fig 1. Oropharyngeal examination revealed palpable large non tender swelling of right soft palate crossed the midline and pushing the uvula to the opposite side.

Fig 2 Computed tomography scan showed a large well-defined heterogenous mass at the parapharyngeal region measuring 5.0cm x 7.3cm x 9.2cm without any involvement of parotid gland.

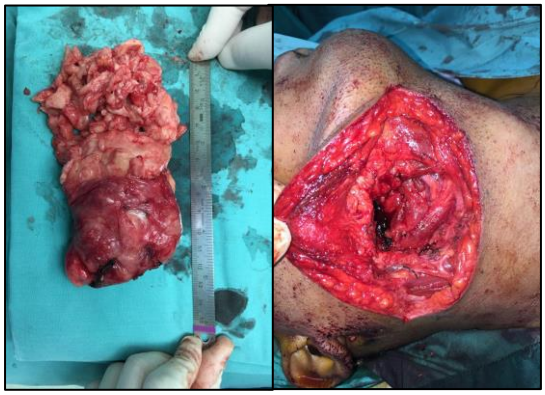

Fig.3,4 Excision of the right parapharyngeal mass via transcervical approach, a single mass weighing 30g was found measuring 12cm x 5cm x 2cm.

Fig 5 Oropharyngeal examination showed normal lateral pharyngeal wall with intact mucosa.

Discussion

Tumors arising in the parapharyngeal space represent a challenge to the head and neck surgeon. Not only because they are rare, but also the location and the size of the tumors themselves. Surgery is the mainstay of treatment for tumors of the parapharyngeal space. The choice of surgical approach is influenced by the size of the tumor, its location, its relationship to the great vessels and the suspicion of malignancy.[2]

The approaches namely transcervical, transparotid and midline mandibulotomy are the choices. [1,3,4] Transcervical approach is considered if the parapharyngeal mass with a slender attachment of the tumor to the deep lobe of parotid gland or those appearing with a separating plane of fat between the tumor and the deep lobe of parotid gland on imaging. Whereas transparotid approach is performed if the attachment between the tumor and deep lobe parotid gland is vast. The midline mandibulotomy is rarely used, but is rather reserved for tumors necessitating wide exposure of the parapharyngeal space tumor, such as very large lesions, malignant transformations, revisions and masses that were exposed to radiotherapy.

This patient eventually underwent transcervical approach as the tumor was completely dissected and had a smooth surgical plane. It is also brings the least morbidity the patient can experience. The strategy used during surgery should be dependent on the status of the tumor. In the present study, this was determined with information obtained via clinical evaluation, imaging analysis and histological analysis. The most common histologic types were schwannoma or pleomorphic adenoma. In schwannoma cases, tumors should be enucleated to preserve the function of the lower cranial nerve. When pleomorphic adenomas are resected, tumor spillage should be avoided to prevent relapse.[5]

Postoperative radiotherapy is used for high grade disease, in cases of questionable resection adequacy and for lymph node and perineural invasion. Patient can also be offered the combined chemoradiotherapy however there is limited literature on the effectiveness of chemotherapy in managing the disease. [6]

Conclusion

Despite of the rarity of pleomorphic adenoma in parapharyngeal space, it should be among the differential diagnosis and a complete removal should be the aim as malignant transformation is possible in this type of pathology. CT scan extending from base of skull till upper thorax are important in planning the approach for complete removal of the mass followed by radiotherapy in malignant transformation cases.

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