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CASE REPORT

Surgical techniques for pleomorphic adenoma in the hard palate: A case report and literature review

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Abstract:

Objective: To report a case of pleomorphic adenoma that was surgically removed and to describe the surgical technique available to remove this lesion. **Case Report:** A male patient, caucasian, 46 years old, with a 4-year history of pleomorphic adenoma. He mentioned that he went to other services for treatment, but without success. He came at our service for treatment with tumoral excision. Local anesthesia was performed with mepivacaine with a vasoconstrictor and tumoral excision was performed with the overlying mucosa and the periosteal region to avoid recurrence. The patient has been under postoperative follow-up for two years without recurrence. **Conclusion:** Pleomorphic adenoma is a benign tumor and presents as a submucosal mass of slow growth. The ideal treatment for the Pleomorphic Adenoma tumor is the total excision of the lesion with the removal of the mucosa covering the region to avoid recurrence.

Keywords: Hard Palate; Excision; Pleomorphic Adenoma; Rare Benign Tumor; Salivary Gland

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INTRODUCTION

Salivary gland tumors represent 3% of head and neck tumors. Pleomorphic Adenoma is the most common salivary gland tumor, constituting around 40 to 70% of all salivary gland-related tumors in the minor salivary glands[1]. The term "Pleomorphic" refers to the basis of embryogenesis of the origin of these tumors that carry epithelial and mesenchymal tissues[2] that originate from cells that intercalate and are myoepithelial[3].

This lesion usually occurs more in the second decade of life, with a preference for females[1]. Clinically, the Pleomorphic Adenoma presents as a firm or rubbery submucosal mass without ulceration or inflammation around it, usually asymptomatic[4]. The region with the highest incidence of this tumor is the palate, followed by the lip, buccal mucosa, the floor of the mouth, tonsils of the tongue, pharynx, and retromolar area[1].

To establish a diagnosis of Pleomorphic Adenoma is necessary to perform an incisional biopsy, as the differential diagnosis of palatal lesions is based on other minor salivary gland tumors, such as squamous cell carcinoma and other benign and malignant mesenchymal tumors such as neurofibroma[5]. Additionally, complementary exams, such as computed tomography and magnetic resonance, provide information about the tumor's location, size, and extension to the superficial structures, depth, and surrounding tissues[1]. The adequate treatment for Pleomorphic Adenoma is a local excision with the periosteum or bone removal if involved[1].

This study aims to report a case of a pleomorphic adenoma of the hard palate that was surgically removed with success and had no recurrence and to perform a literature review of the lesion and its treatment.

CASE REPORT

Forty-six-year-old male Caucasian patient with a history of a lesion in the hard palate region for four years. He mentions that the lesion grew progressively and was painless, reporting that he sought medical attention in two other services, but without success, due to the unavailability of the surgical center.

He was admitted to our service with an exophytic lesion on the hard palate, 10 cm, soft on palpation, and well delimited. An incisional biopsy was performed in the center of the lesion, which showed a Pleomorphic Adenoma in the hard palate. (Figure 1)

Figure 1. Preoperative image of an exophytic lesion on the hard palate that surpasses the limits of the mucosa with exposure in the oral cavity.

Tumor resection was indicated on an outpatient basis with a local anesthetic, proceeding with the removal of the overlying mucosa and removal of the periosteum, according to Psychogios et al.[3]. (Figure 2)

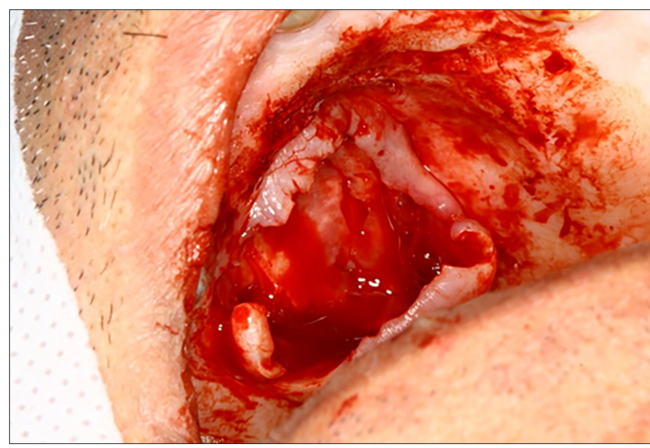

Figure 2. Intra-Operative Image after tumor resection with removal of the overlying mucosa and periosteum.

The resected tumor specimen was sent for pathological anatomy, and the histological sections revealed the presence of a salivary gland neoplasm with histological characteristics of Pleomorphic Adenoma.

After the removal, the patient was followed-up for two years postoperatively without lesion recurrence. (Figure 3)

DISCUSSION

Tumors of the minor salivary glands, such as Pleomorphic Adenoma, are usually not encapsulated like tumors of the larger glands, and the risk of Pleomorphic Adenoma becoming malignant is around 6% [6]. As the tumor originates in the minor salivary glands, it mainly

Figure 3. Two-year postoperative image with no signs of lesion recurrence.

occurs in the soft or hard palate, as the concentration of salivary glands present with submucosal swelling with or without ulceration[7].

To establish the diagnosis of Pleomorphic Adenoma an incisional biopsy is necessary. The biopsy should be performed in the center of the tumor and not at the margins, preferably by puncture, to achieve minimal morbidity and minor damage [8]. In the case reported, two biopsies were performed on different tumor areas.

With a preoperative biopsy, it is possible to define the degree of encapsulation and perform the most appropriate surgical technique. A common finding in Pleomorphic Adenoma biopsies is that infiltration occurs by neoplastic cells called pseudopods and can remain in the surgical site[9].

The evidence-based practice for the treatment of Pleomorphic Adenoma is wide local excision and removal of the involved bone as the first treatment option, and simple enucleation should not be done because local recurrence can occur, and for tumor removal, the lesion must not rupture unless the capsule ruptures and the tumor spreads [6]. In the case of thin mucosa, mucosal resection is necessary, which is performed to avoid recurrences and, if necessary, avoid a palatal flap or fat pad flap to maintain the mucosa for a more extended period[10].

After the complete excision of the lesion with the overlying mucosa followed by removing the periosteum and the lesion, the surgical region can heal by second intention. A buccal fat pad flap can be considered for more extensive defects, as it is rapid in its local epithelialization with low morbidity of the donor area and high vascularization [11]. Another option is a mucosa incision and surgical enucleation with careful dissection followed by primary closure. If the capsule is cut or incomplete excision, residual tumor cells may be left behind, resulting in recurrences[12]. In the reported case, we removed the overlying mucosa and the regional periosteum to reduce the probability of recurrences. The treatment was effective, as no recurrences were detected in the two years of follow-up.

Additionally, its excision may be performed under local anesthesia, using an electric scalpel to prevent bleeding[13].

CONCLUSION

Pleomorphic adenoma is a benign tumor and presents as a submucosal mass of slow growth. The ideal treatment for the Pleomorphic Adenoma tumor is the total excision of the lesion with the removal of the mucosa covering the region to avoid recurrence**.**

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