

Case Report

Weber approach for retromolar adenoid cyst carcinoma: case report and literature review

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ABSTRACT

Adenoid cyst carcinoma (ACC) is an uncommon facial tumor and challenging to treat; surgical treatment is challenging due to its localization. A 49-year-old Latin female patient with a one-year history of soft tissue-depending mass of slow growth in the right maxillary region. Laboratory tests reported normal. Contrast-enhanced computed tomography showed a maxillary tumor. Patient underwent to surgical resection by Weber-Fergusson approach. The patient received postoperative adjuvant radiotherapy. ACC is a challenging entity to treat, surgical resection, and radiotherapy is required. The combination of surgery and radiotherapy represents the definitive treatment for ACC. Chemotherapy remains controversial and is reserved for palliation in selected cases.

Keywords: ACC, Weber-Fergusson surgical approach, Modified radical hemimaxillectomy

INTRODUCTION

Among tumors of the head and neck region, particularly those of the salivary glands, minor salivary glands tumors are the most common. The most frequent is ACC, which represents 1-5% of the head and neck malignancies and 8-10% of the salivary glands, with an annual incidence reported 3-4.5 cases per million.¹⁻⁶

The most common location of the ACC is the oral cavity near the hard palate, followed by the tongue and paranasal sinuses.⁷⁻⁹

CASE REPORT

We present the case of a 49-year-old Latin female patient with a one-year history of soft tissue-depending mass of slow growth in the right maxillary region, with progressive neurological pain that limited feeding. The

olfactory and taste were unaffected such as facial expressions and tongue motility.

The patient denied allergies, chronic drug use, and other diseases.

Primary care initially treated symptomatically with no satisfactory response and sent to general surgery service, who solicited laboratories and a craniofacial contrast-enhanced computed tomography. The rutin tests did not document hematological alterations.

Tomography reported an 18×26-millimeter homogenous irregular bulking-up tumor with muscle and osseous infiltration, with no cervical metastases detected by this method (Figure 1).

Surgical treatment consisted of a modified radical hemimaxillectomy by Weber-Fergusson approach (Figure 2);

the postoperative histopathological study reported positive margins with a perineural spread of a high-grade ACC (Figure 3).

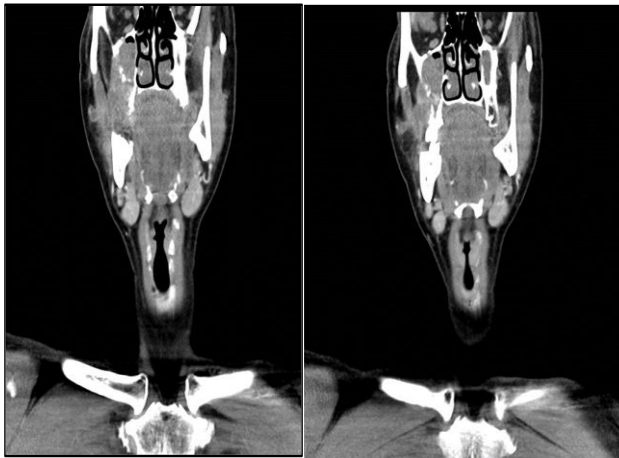


Figure 1: Preoperative contrast-enhanced computed tomography showing maxillary tumor (red arrow).

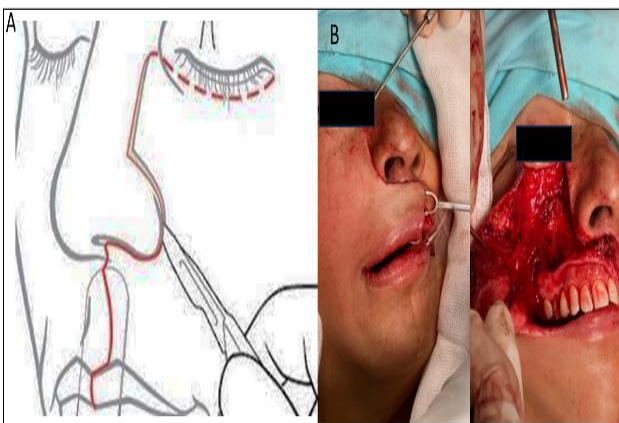


Figure 2 (A and B): Weber-Ferguson approach. Schematic illustration and surgical photography.

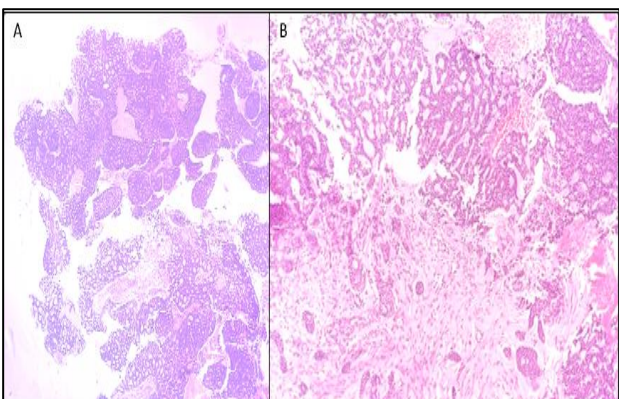


Figure 3 (A and B): Adenoid cystic carcinoma. Mixed pattern with tubular and cribriform areas. Islands of hyperchromatic, basophilic, and isomorphic cells surrounded by hyalinized stroma. (HE, 4x). Cribriform pattern and its tumor cells. (HE, 10x).

Patient received total of 60 Gy fractionated adjuvant postop radiotherapy. After 6 months follow-up, patient keeps with no clinical evidence of tumoral activity.

DISCUSSION

Few descriptions exist in literature due to its rarity, even though, North American, and European series describe a 30% oral cavity, 46% major salivary glands, 10% paranasal sinuses, and 4% bronchopulmonary distribution.^{10,11} In a 498 North American patient series showed 86% Caucasian, 9.4% Afro-American, and 4.6% Hispanic ethnic incidence.¹²

Most significant risk factor identified is Aforegoing facial radiotherapy (OR: 11.41), and 2 most relevant protection factors are vitamin C intake >200 mg/day, and fiber intake >1.4 gr/day. Tobacco consumption association is controversial due to statistical discrepancies in different series reported, on the other hand, there is no evidence of association with alcohol consumption, and papillomavirus infection is present in 11% of cases.¹²⁻¹⁷

Contrast-enhanced computed tomography in diagnostic workups allows for identifying tumor extension and infiltrating neighbor structures.¹⁸ Fine needle aspiration biopsy (FNAB) should not be considered first-line diagnostic tool because FNAB overestimates sensibility and sub-estimates specificity.¹⁹ FNAB should be reserved for unresectable tumors.²⁰

The surgical approach must allow enough surgical field for 10 millimeters of resection margins, Weber-Ferguson incision is the extension of the Moure paralatero-nasal incision, it extends descending over the superior lip midline to obtain access to the palate-dental plane with minimal healing retraction due to the "Z" type incision.

Gold standard treatment relies on combination of radical surgical resection with postop radiotherapy.²¹ Reported survival rate for respectable cases for 5, 10, and 20 years of follow-up is 68%, 52% and 28% respectively.²²

CONCLUSION

ACC represents a diagnostic and therapeutic challenge due to its anatomical location and clinical presentation. Surgical resection and radiotherapy are the definitive treatment, and chemotherapy is still controversial, often reserved for palliation in selected cases.

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