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## Case Report

# Aggressive Behavior of Antralpseudocyst in the Maxilla: Case Report - 6

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## ABSTRACT

The antral pseudocyst originates from the accumulation of serous inflammatory exudate in the sinus membrane without a specific etiology, this cyst has not of age group or gender preference. Radiographically, it is associated with a soft dome-shaped radiopaque pattern. This case is about a male patient of 58 years of age, with increased volume in the malar and left genic region of smooth, fluctuating consistency, which crackles at the pressure. Intraorally with the corresponding increase in volume in the sac, without changes in the oral mucosa. The tomography showed a radiolucent lesion that occupies and destroys left jaw and orbital floor. Thus, complete enucleation of the lesion and reconstruction of adjacent structures were performed. Clinical and imaging follow-up was carried out without postoperative complications and 8 years free of injury. It is of vital importance a correct diagnosis to guide the treatment adequately, however it is not necessary to underestimate the behavior of benign lesions and described as non-invasive.

**Key Words:** Antral Pseudocyst; Benign Neoplasia; Enucleation; Reconstruction

## INTRODUCTION

The antral pseudocyst is a rare pathology that originates from the accumulation of serous inflammatory exudate in the sinus membrane that may or may not produce sessile inflammation. No specific etiology is known but has been associated with viral infections or recurrent upper respiratory tract irritation [1].

Radiographically, it is associated with a soft, well delimited radiopaque pattern that is described as a dome-shape in the walls of the maxillary sinus mainly in the lower one [1,2,3]. Differential diagnoses must be taken into account both tumors and cysts Odontogenic and not odontogenic. Its diagnosis is made by histological study with material obtained from fine needle aspiration in which a yellowish viscous liquid is present and histologically presents a cylindrical pseudo-stratified epithelium with presence of inflammatory infiltrate and blood cells [4].

## CASE REPORT

This is a 58-year-old male patient with no relevant history for the condition, who reported having started some months ago with an increase in volume in the malar and left genic region, without receiving treatment (Figure 1). It does not mention suffering from systemic diseases or being under medical treatment. It denies a history of trauma or previous surgeries in the affected region. On physical examination he found his vital signs within normal parameters, with fascies characterized by a slight increase in volume in left side of the face, at palpation without local change in temperature, with a smooth, fluctuating consistency, which crackles at the pressure. Intraorally with the corresponding volume increase in the back of the sack, without changes of coloration in the oral mucosa, of adequate hydration, without liquid outlet or secretion. Incomplete permanent dentition with poor oral hygiene.

On aspiration biopsy was obtained by easily obtaining a light brown coloring liquid with blood residues. Under local anesthesia, incisional biopsy was performed for histopathological study, which later reported the antral pseudocyst, and its surgical enucleation was scheduled. Complementary imaging studies were carried out, which showed a radiolucent lesion in his tomographic image that occupies and destroys the left side of the jaw, including the floor of the orbit (Figure 2). A stereolithographic model was developed for the planning of the procedure (Figure 3).

Subsequently, in the operating room under general anesthesia with orotracheal intubation, a crestal approach with extension throughout the entire alveolar process was performed intraorally to expose the anterior portion of the maxilla on the left side, allowing the complete enucleation of the lesion without the need for cutaneous incisions (Figure 4).



Figure 1: Preoperative aspect, showing face deformity.



Figure 2: CT Scan showing large destruction.



Figure 3: 3D model used for surgery planning.

According to the planning carried out through the same approach was placed a mesh for orbit that was fixed to the bone remnant. Simultaneously with the enucleation, the anterior iliac autograft was taken to obtain a corticomedular block that was fixed with a system 2.0 osteosynthesis material (Figure 5).

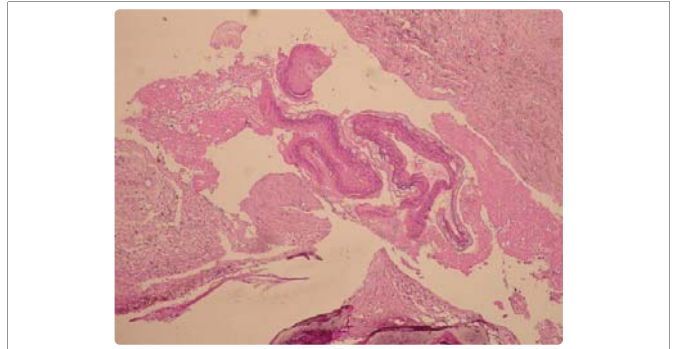
The surgical specimen was submitted for histopathological examination; in its microscopic description, loose fibroconnective tissue was identified, with ducts of dilated salivary glands, and in the interior myxoid aspect material without cover epithelium, establishing the diagnosis of antral pseudocyst (Figure 6).

Clinical and imaging follow-up was carried out without complications, achieving adequate facial symmetry without compromising acuity or ocular mobility, and with complete intraoral cicatrization (Figure 7). The wound of the protruding area in the hip course without eventualities. At 8 years of the procedure there are no relapse data, with complete integration of the graft (Figure 8).

**DISCUSSION**

Antral Pseudocysts are generally found as a finding during the planning of surgical procedures, mostly implantological [5,6,7] involving maxillary sinus involvement because most of them do not present clinical or radiographic manifestations due to their size [8,9]. However in our case the patient had a significant volume increase that caused facial deformity, loss of the back of the sac and mild pain symptomatology.

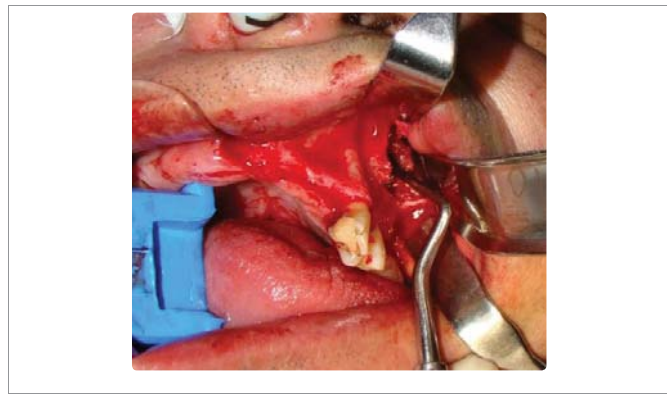
It is important to perform a correct diagnosis of the antral pseudocyst because it usually does not require treatment for its size less and does not inflate adjacent tissues [10], in counter position to some of the differential diagnoses that require surgical treatment such as mucocele [11], as well as differentiate it of the majority of



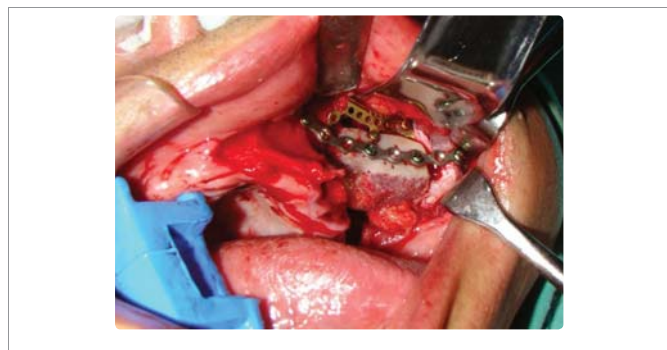
**Figure 6:** Histopathology of the case showing fibrous connective tissue and the absence of the epithelium.



**Figure 7:** 3D postoperative reconstruction showing the bone graft and the osteosynthesis material.



**Figure 4:** Intraoral aspect of the surgical removal of the pseudocyst.



**Figure 5:** Immediate reconstruction with autogenous bone.



**Figure 8:** Postoperative aspect.

odontogenic cysts and tumors requiring enucleation or resections with injury-free margins [12]. In the present case the behavior of the cyst was completely different from that described in the literature as it infiltrated and caused destruction of the floor of the orbit and left jaw.

The aspiration of the antral pseudocyst is described as a light yellow liquid however in this case the obtained exudate had light brown coloration with blood remains. The aspiration of the lesion is not a treatment option because it is necessary to enucleate the tissue completely [4, 5].

The most used surgical techniques as treatment are endoscopic surgery and open surgery Caldwell-Luc type [7,10,12]. In the present case it was necessary to perform a broader approach due to the size of the lesion and the involvement of adjacent structures, the usual behavior of antral pseudocyst, which is described as non-invasive, however, in this case reconstruction was necessary by a Titanium mesh for orbit that was fixed to the bone remnant and simultaneously to the enucleation the anterior iliac autograft was taken to obtain a corticomedular block that was fixed with system 2.0 osteosynthesis material.

## CONCLUSION

It is vital to carry out the diagnosis of each of the entities that may present in the head and neck as this determines the success, the type of treatment and the alternatives available for each of the diagnoses.

Although the antral pseudocyst in most cases is found as a finding in routine imaging studies, when it is diagnosed, it is important to perform a complete removal of the lesion and perform a histopathological study.

In the case of the antral pseudocyst, it is important not to neglect the behavior of the lesion, since we have shown how it can invade and compromise the integrity of adjacent structures.

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