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Differential diagnosis of antral pseudocyst. A case report

Augusto César Sette-Dias, Marcelo Drummond Naves, Ricardo Alves Mesquita, Evandro Neves Abdo

SUMMARY

Antral pseudocyst (AP) is a process formed by the inflammatory exudate accumulation below the sinuses mucous membrane and causing a sessile elevation. AP is a dome-shaped, well-delineate, faintly radiopaque lesion on the intact floor of the maxillary sinus. A case of AP with an unusual location is presented. A 24-year-old male was submitted to the panoramic radiographic exam and an around, well-defined, faintly radiopaque lesion was detected in the tuberosity extension of maxillary sinus. The differential clinical-radiograph diagnoses were AP, non-odontogenic cysts, odontogenic cysts, odontogenic and non-odontogenic tumours. Fine needle aspiration demonstrated presence of viscous yellow liquid. It was performed an excisional biopsy and the histological diagnosis was AP. It is necessary biopsy when this doubt persists and also emphasize the recognition of AP in other differential diagnose and management with other lesions in region of the maxillary sinus.

Key words: odontogenic cysts, odontogenic tumours, panoramic radiography, maxillary sinus.

INTRODUCTION

The antral pseudocyst (AP) is formed by the serous exudate inflammatory accumulation below the sinuses mucous membrane and caused a sessile elevation (1). Its aetiology is still obscure, thought its variation may be associated with a higher incidence of upper respiratory tract viral infection or irritation from dry forced air heating (2). Several terms have been applied to name it: mucous retention cyst, mucous cyst, serous cyst (3). AP must be differentiated from other lesions of the maxillary sinus, especially retention cysts and mucoceles. The AP radiographic diagnose may be carried out by a panoramic radiography or computerized tomography (4).

In this paper it is presented a case report of AP, by singular characteristics as localization and concomitant tooth absence that there was doubt about it.

*School of Dentistry. Universidade Federal de Minas Gerais, Belo Horizonte, Brazil

Augusto César Sette-Dias – D.D.S., MS*
Marcelo Drummond Naves – D.D.S., PhD*
Ricardo Alves Mesquita – D.D.S., PhD*
Evandro Neves Abdo – D.D.S., PhD*

Address correspondence to Dr. Augusto César Sette Dias, Universidade de Federal Minas Gerais, Faculdade Odontologia, Av: Antônio Carlos, 6627 sala 3204, Belo Horizonte, MG, Brasil.
E-mail address: gutodonto@yahoo.com.br

CASE REPORT

A 24-year-old male presented to the School of Dentistry of the Universidade Federal de Minas Gerais, Belo Horizonte, Minas Gerais for a panoramic radiograph exam with an orthodontic purpose. The panoramic radiograph exam revealed the presence of the teeth 18, 38, 48 and the absence of the tooth 28. In the region of the tooth 28, it was observed an around, well-defined, faintly radiopaque, measured 30X30 mm lesion that occupied the tuberosity extension of right maxillary tuber (Fig. 1A). Medical history denied any symptom and patient related that 28 tooth there had not been previously removed. Intraoral exam did not demonstrate any alteration in the form, volume and color of the region of tooth 28 (Fig. 1B). Teeth 27, 26 and 25 presented positive pulpal sensibility. Thediagnose of AP was based on clinical, radiographical, and histological investigations and differentiated from non-odontogenic cysts, odontogenic cysts, odontogenic and non-odontogenic tumours. Regarding non-conclusive clinical-radiographic diagnosis, it was decided for a fine needle aspiration followed by excisional biopsy. A fine needle aspiration demonstrated presence of viscous yellow liquid similar to odontogenic cyst. (Fig 1C, D). After local anesthesia, an excisional biopsy

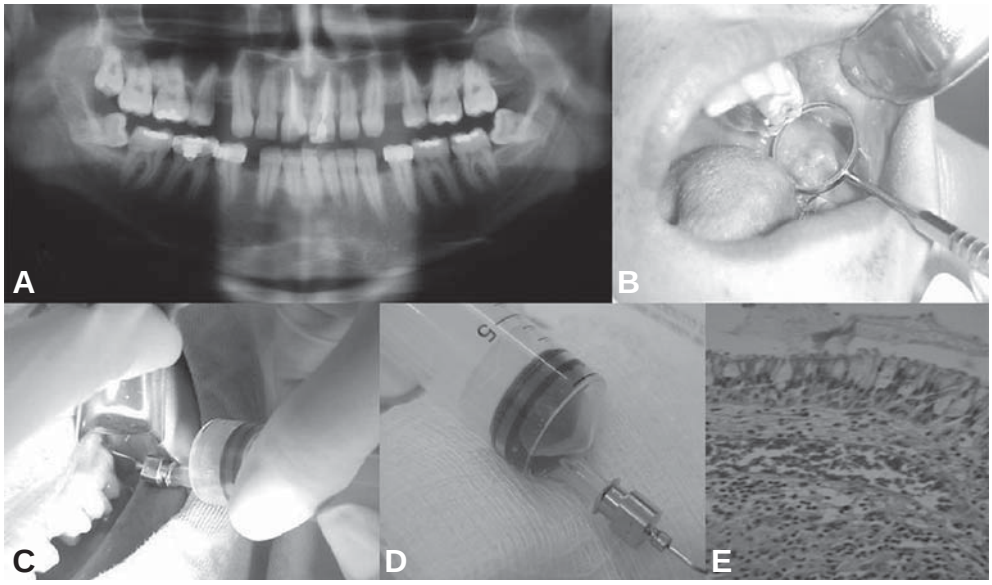

Fig. 1. A – in the panoramic radiographic is observed the presence of 18, 38, 48 teeth and the absence of the 28 tooth. Also, in this same region of the 28 tooth, was noticed an around, well-defined, faintly radiopaque, measured 30×30 mm lesion. B – on the clinical examination was not observed any alteration in the form, volume and color of the region of tooth 28. C, D – fine needle aspiration demonstrated presence of viscous yellow liquid. E – the histological sections showed a columnar pseudo-stratified epithelium similar to the jaw epithelium, blood vessels and mononuclear inflammatory infiltration (Haematoxilin and eosin stain, ×200 magnification).

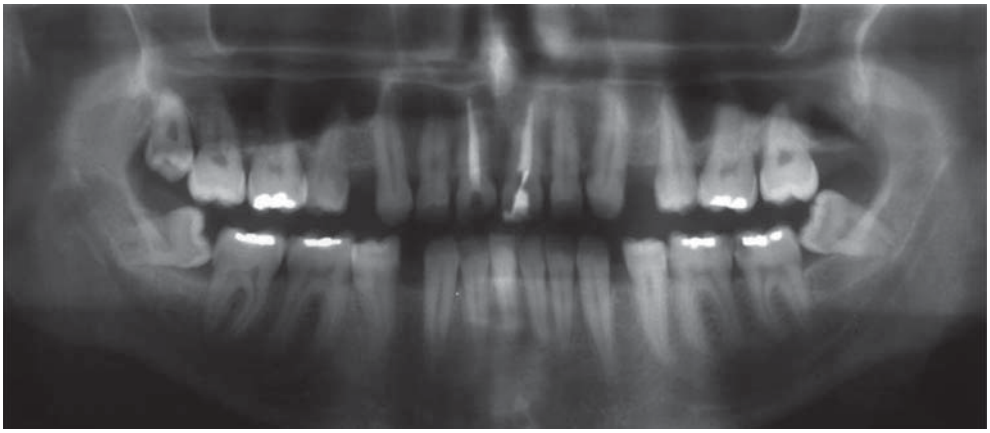

Fig. 2. Panoramic radiograph after 8 month of the follow-up. The patient is free-diseases.

was performed enclosed to the 28 tooth with communication to the maxillary sinus. The specimen was collected on a 10% formaldehyde buffer and sent to the Oral Pathology Service. The histological sections showed a columnar pseudo-stratified epithelium lining the inner wall of the cyst, (blood) veins, edema, and mononuclear inflammatory infiltrate was noted in the underlining tissue. (Fig.1E). Since histological exam was performed we consider liquid analysis unnecessary. A diagnosis of AP was made. The patient is free-disease up to 8 months of follow-up (Fig. 2).

DISCUSSION

The clinical-radiograph-histological features of the case report are sufficiently to diagnosis of the AP. The patient was 24-year-old male with a lesion located in the left maxillary sinus. The lesion was harmless and the patient did not complain any symptoms. The histological features were those expected in cases of the AP (6).

The location of AP in tuberosity maxillary sinus extension and this location that coincided with absence the 28 teeth created doubt about the origin of the lesion and other differential diagnosis. The differentiation of the radiographic images in the maxillary sinus region is related with localization (sinus or extra-sinus) of lesions. The differential diagnosis of AP included a mucous retention cysts (primary mucoceles), that are small, thin-walled cysts and are generally found incidentally. Another differentiation is made between odontogenic cysts in maxilla that extends into sinus. Odontogenic cystic lesions include dentigerous cysts, odontogenic keratocysts, residual cysts, and inflammatory lesions as radicular cysts. Cystic ameloblastoma may be included between odontogenic tumours (5, 7).

AP classically, is a dome-shaped, well-defined, faintly radiopaque lesion on the intact floor of the maxillary sinus (5, 8). In current case, the image was not making clear between AP and odontogenic tumor. Fine needle aspiration is doubtless in these cases of great value, when primary it distinguishes between cyst and tumors. The fine needle aspiration carried out had turned out to be positive with the presence of a yellow liquid similar in viscosity to a cyst, not disregarding the diagnostic possibilities and was felt the need to submit the patient the surgical exploration and biopsies (9, 10). Additionally to the positive fine needle aspiration result,

but diagnostic non-conclusive, it was necessary a biopsy (11).

CONCLUSIONS

In conclusion, classically as AP is harmless lesion, no treatment is required (10, 11). However, in the current case it was necessary a surgical intervention but with diagnostic goal. In the follow-up of the 8 months the patient is free-disease. It is important to consider the AP in differential diagnosis of the maxillary sinus lesions or odontogenic cysts even when classical radiographic feature is not observed.

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