Kledstadt's cyst. A case report and review of the literature

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CASE REPORT

GENERAL SURGERY

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Abstract: The Kledstadt cyst or nasolabial cyst is a very infrequent non odonthogenic cyst, classified within those called fissured cysts. Its etiology is unknown and signifies that this origin can be in the fusion line of the frontonasal and maxillary processes, due to retention of ectodermal tissues. Diagnosis is most frequently achieved by x-rays, unless the size of the cyst is considerable and causes swelling of the vestibular plate of the maxilla and /or the region of the palatine papilla causing pain. The treatment consist of surgical resection through an intraoral sub labial access.

Keywords
Nasolabial Cyst, Kledstadt cyst, Nasoalveolar cyst.

Introduction

Kledstadt's cyst or nasopalatine cyst was first described by Zuckerkandl in 1882 and the first published case was in 1892 by Chatelier, comprising between 0.7 and 2.5% of oral cysts being more frequent in women than in men with a mostly unilateral 3:1 ratio. It is considered as a non odontogenic cyst of the oral cavity. The presence of epithelial remnants of the nasopalatine duct and embryological structures connecting the oral and nasal cavity in the area of the incisor canal are considered as a probable etiology.[1] It is believed that the nasopalatine duct cyst is derived from the epithelial remnants of the nasopalatine duct during the embryonic period and that both an infectious and a traumatic process can be the necessary stimulus for cell proliferation and cystic formation.

Case report

A 30-year-old male patient with no history of chronic disease, infection or trauma presented to the Oncological Surgery Department of Mexico's General Hospital due to an increase in volume in the right nostril and upper gum, refering occasional pain, without adding any other symptoms. On physical examination, an increase in volume and slight pain on deep palpation was noted. The CT scan showed a 3.5 x 2 cm lesion compatible with a nasolabial cyst and probably a supernumerary tooth on the inside, so it was decided to perform surgery to remove the lesion. Under general anesthesia, a 2 cm incision was made in the vestibule **(Figure 1A)**, and then the pericapsular tissue was detached and dissected by planes, respecting the cystic integrity to achieve en-bloc resection **(Figure 1B)**. Finally, the cavity was curetted **(Figure 1C)**, hemostasis was verified and the cyst wall was sent for analysis **(Figure 1D)**, which showed pseudo stratified ciliated epithelium with the presence of globular cells which confirmed the diagnosis of Kledstadt's cyst. The result of the histopathological analysis of the surgical specimen showed a fibro conjunctive wall covered by columnar pseudo stratified epithelial tissue with goblet cells, confirming the clinical diagnosis of a nasolabial cyst. The patient's follow-up with regular controls showed no signs of recurrence in 2 years.

Discussion

Physical examination findings are consistent with the digital palpation between the floor of the nasal vestibule and the gingivolabial junction. The finding of a lesion of soft and fluctuating consistency which can be painful, the location in the nasal vestibule and the swelling of the lips and nasal ala, help to confirm the diagnosis.[2] The initial imaging study should include x-rays in which the finding of a well-defined radiolucency in the anterior palate is found, which can be identified with an upper occlusion x-ray.[3] There is wide approval on the use of CT scan and MRI because these imaging modalities allow a more detailed study of the pathology, allowing the former to identify calcifications in the contents and a better resolution of the bony structures. On physical examination, the dental organs are found to be unaltered and the periodontal membrane is integrated. The biopsy is the most important diagnostic aid, however the decision to perform an incisional or excisional biopsy will depend on the size of the lesion as well as its contiguity with other anatomical structures. The treatment is surgical resection of the lesion, with the intraoral route being the one chosen through a sub labial incision with a lower rate of recurrence and excellent results.

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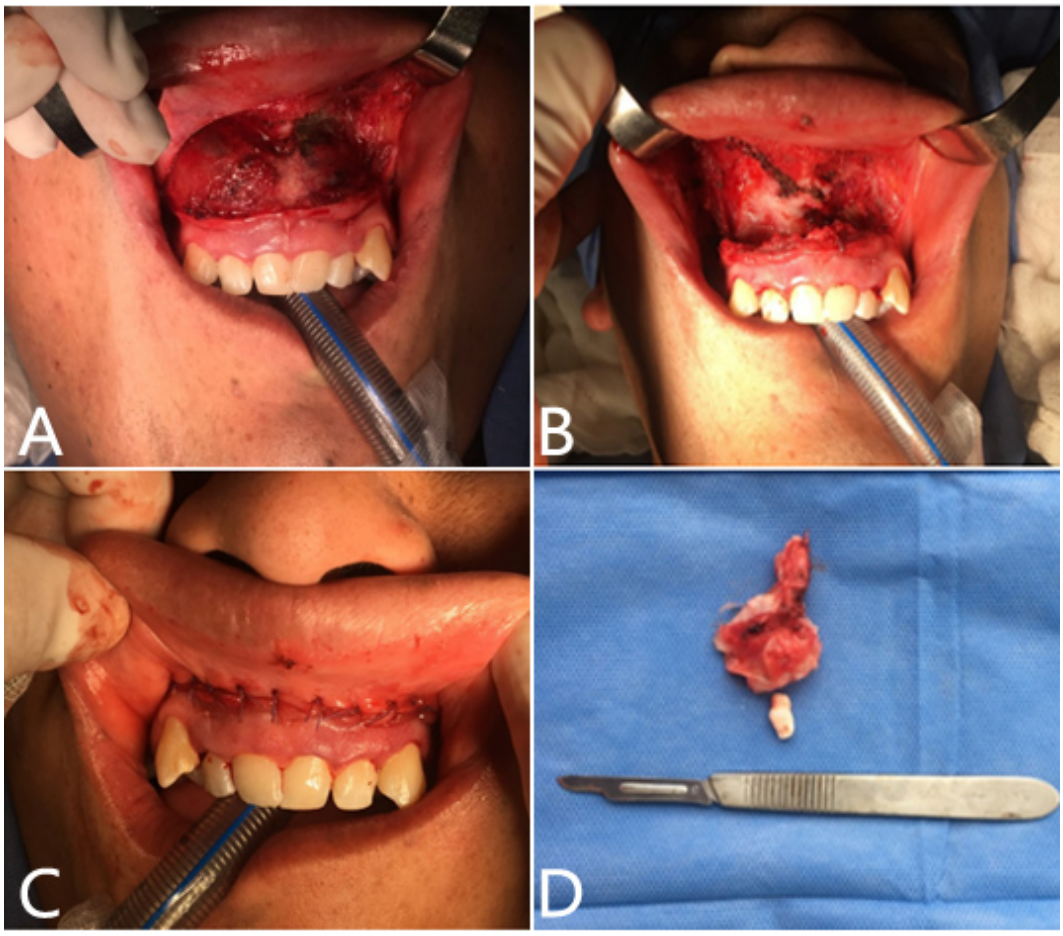

Figure 1. (A) Incision of the vestibular fundus of approximately 4 cm. (B) Cavity check and curettage, (C) Cavity closure with 3-0 Vycril. (D) Extracted nasolabial cyst wall of 3 x 5 x 3cm and supernumerary tooth.

An alternate route is the endonasal approach with marsupialization, both with the subsequent histopathological study.[4,5]

Conclusion

Kledstadt's cyst is a rare pathology and should be analyzed together with the most frequent pathologies in order to make an adequate differential diagnosis. It is important to remember the tendency to affect women between the third and sixth decade of life, presenting with increased volume and slow evolutionary upper gum swelling. The use of complementary examinations such as CT scan with focus on soft tissue or MRI should be considered.

Conflicts of interest

None.

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