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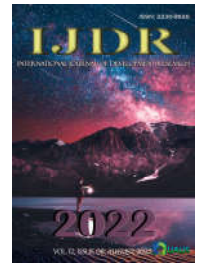
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CASE REPORT

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## RARE MANIFESTATION OF BILATERAL NASOLABIAL CYST: CASE REPORT

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### ABSTRACT

**Introduction:** Nasolabial cysts are rare non-odontogenic lesions accounting for approximately 0.7% of cysts diagnosed in the maxillofacial region. They often emerge as slow-growing and painless nasolabial bulging that can be associated, or not, with nasal obstruction and asymmetric nostril opening. In some cases, they can get infected and make the affected area painful. These lesions are often unilateral, although rare cases with bilateral manifestation were described in the literature. Surgery, with sublabial or endonasal cyst excision, is the treatment of choice. **Report:** A 47-year-old female patient with bilateral bulging in the nasal region, associated with nasal obstruction, was treated at an Otorhinolaryngology service. Physical examination has evidenced painless bulging with cystic consistency and mild nasolabial folds' effacement. Computed tomography scan of the sinuses has confirmed the hypothesis of nasolabial cyst. The patient was subjected to surgery based on the sublabial approach in order to fully remove the cysts. Anatomopathological examination has confirmed the bilateral nasolabial cyst diagnosis. **Conclusion:** The current study presented a nasolabial cyst case with rare bilateral manifestation, which was successfully managed through sublabial enucleation and did not show complications or recurrence.

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## INTRODUCTION

Cysts are cavity lesions fully covered by epithelium and filled with fluid or semi-fluid material that may originate from odontogenic or non-odontogenic tissues in the maxillofacial region (1). Nasolabial cysts are rare non-odontogenic lesions accounting for approximately 0.7% of cysts diagnosed in the maxillofacial region (2). Although they were first described by Emile Zuckerkandl in 1882, they were referred to in the literature as Klestadt cysts, based on the study carried out by Walter Klestadt in 1953, and, later on, as nasoalveolar cysts (3). Nowadays, "nasolabial cyst" is the most accepted nomenclature for these cysts, since they are fully set in soft tissues, unlike what is proposed with the term "nasoalveolar cyst", which infers an erosion defect in the adjacent maxillary bone (4). These cysts often emerge as slow-growing and painless nasolabial bulging associated, or not, with nasal obstruction and asymmetric nostril

opening. In some cases, they can get infected and make the affected region painful (3,5,6). Although they are often unilateral, rare cases with bilateral presentation were described in the literature (4). Surgery conducted through sublabial or endonasal route is the treatment of choice (7). The current report presents a rare case of a patient affected by bilateral nasolabial cyst, which was successfully approached through sublabial route.

## CASE REPORT

A 47-year-old female patient with bilateral bulging in the nasal region, associated with nasal obstruction, was treated at an Otorhinolaryngology service. Physical examination has evidenced painless bilateral bulging at the base of the nasal vestibule, with cystic consistency and mild nasolabial folds' effacement. Rhinoscopy did not show visible masses or fistulas. The remainder of the physical examination has evidenced normal results.



**Figure 1. Full nasolabial cyst on the left side. Pocket on the right side, after cyst removal**



**Figure 2. Nasolabial cysts ruptured after their removal**



**Figure 3. Intraoperative after removal of nasolabial cysts**

The patient did not have comorbidities. She brought along an ultrasound exam whose findings were compatible to simple cystic formations in the paranasal region – these formations were suggestive of bilateral nasolabial cyst. CT scan of the sinuses has evidenced two cystic formations with well-defined contours measuring 3.2 x 2.5 cm, on the right side, and 2.2 x 1.7 cm, on the left side, in the topography of the nasal vestibule region. This outcome corroborated the hypothesis of bilateral nasolabial cyst. The patient was subjected to surgery based on the sublabial approach in order to fully remove the cysts; she did not have any complications. Anatomopathological

examination has shown membranous fragments of connective tissue covered by pseudostratified ciliated epithelium, and it confirmed the nasolabial cyst diagnosis. The patient was followed-up on a regular basis and she did not show any signs of recurrence or of other complications.



**Figure 4. Final appearance after the incision in the sublabial mucosa was sutured**

## DISCUSSION

Although nasolabial cysts are often unilateral, they account for approximately 10% of bilateral cases; however, these data may be overestimated due to publication bias (7). Cyst prevalence on the left side is often described in unilateral cases. Nasolabial cysts often affect more women than men; their highest incidence is often observed for black patients in their 30s and 40s (3). The etiology of nasolabial cysts remains under discussion. These cysts were initially assumed to have originated from retention cysts of inflamed mucous glands. According to another hypothesis, they are embryonic tissue trapped between the lateral nasal and maxillary prominences. However, recently, the most accepted theory is that they are remnants of embryonic tissue of the nasolacrimal duct, since they are covered by the same respiratory epithelium. The literature has also reported cases of a similar syndrome presenting nasolabial cysts associated with nasolacrimal duct defects (3). Bilateral nasolabial cysts associated with both chronic inflammation and scarring processes are also mentioned as rhinoplasty complications (8). Nasolabial cyst diagnosis is often suspected through the combination of imaging tests; it is confirmed by the anatomopathological examination of the surgical specimen (8). Computed tomography scan is the exam of choice in this case, since it enables better investigating the association between the lesion and adjacent bone tissue. However, ultrasound examination is a tool widely used to assess soft tissue injuries; it has the advantage of being a non-ionizing and low-cost exam, a fact that turns it into a good option. Nasolabial cysts emerge as well-defined anechoic lesion below the nasolabial fold (9). Histopathological examination of the cyst shows ciliated pseudostratified columnar epithelium - as evidenced in the herein reported case -; sometimes, it shows stratified squamous epithelium (10). Surgery is recommended to establish the histopathological diagnosis, to prevent cyst infection and to improve any aesthetic deformity. Surgical enucleation is the treatment of choice reported in most published articles; it can be performed through two different routes, namely: the intraoral sublabial and transnasal endoscopic approaches. Intraoral enucleation with sublabial incision in the upper jugal sulcus is the most often adopted approach, since it enables widely exposing it without tearing the nasal mucosa or penetrating the maxillary sinus (4). Other methods comprise needle aspiration, cauterization, sclerosing substance injections and marsupialization; however, these modalities present high recurrence rate (4,7). Sheikh et al. reviewed 79 studies conducted with 311 patients and they did not find differences in relapse rates between the sublabial and transnasal enucleation techniques (3).

Intraoral sublabial enucleation was the method of choice applied to the herein reported case; the patient did not present any complications or recurrence, so far. Although sublabial excision is traditionally the most used technique, there has been increase in the use of endonasal approach, lately, since studies conducted in this field did not show differences in recurrence or complication rates between these two techniques.

## FINAL CONSIDERATIONS

The current study presented the case of a patient affected by nasolabial cyst with rare bilateral presentation, which was successfully managed through sublabial enucleation, without any complications or recurrence.

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