

## Bilateral Nasolabial Cyst as a Rare Case Report

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### Case Report

### Abstract

The etiology, clinical features, and treatment of an extremely rare case of a bilateral nasolabial cyst have been evaluated in this report. A 60-year-old female presented to our clinic with a pain-free swelling above the upper lip for a year and obstruction of the left nasal cavity for two months. On undergoing a physical ENT examination, she showed bulging of both nasal fossae and effacement of the bilateral nasolabial groove with a fluctuating smooth mass. A paranasal sinus CT scan showed a smooth, ovoid mass of 20×13 mm at the right side and 26×22 mm at the left side occupying the floor of the nasal fossa and restricted to the soft parts of the premaxillary region, without any

bony destruction. The patient underwent surgical excision under general anesthesia via sublabial approach. Histopathology confirmed the diagnosis of bilateral nasolabial cyst. The patient was asymptomatic during 18-month of postoperative follow-up. Bilateral nasolabial cysts should be considered in the differential diagnosis of cystic masses of the nasal vestibule and deformities of the premaxillary region. Although endonasal endoscopic cyst marsupialization is a relatively new treatment, surgical resection with the sublabial approach is the treatment of choice.

**Keywords:** Nasolabial cyst, non-odontogenic cyst, surgery

### Introduction

Nasolabial cysts, first defined in 1882 by Zuckerkandl, are rare non-odontogenic developmental masses that originate from maxillofacial soft tissues (1). They grow submucosally and extraosseously in the nasolabial region, and they cause nasal obstruction and/or cosmetic deformity (2). Ten percent of the cases develop bilaterally (3, 4). In this article, we discuss the etiology, clinical features, and treatment of the rare bilateral nasolabial cysts.

### Case Report

A 60-year-old female patient was admitted to the ENT polyclinic of our hospital with the complaints of painless swelling above the upper lip that had been growing for a year and of nasal congestion in the left nostril for the past two months. She had no history of congenital anomaly, surgery, or trauma. In her examination, a fluctuant mass with a soft consistency, causing fullness in the bilateral nasolabial region and in the superior gingivolabial sulcus, was present. A cystic lesion covered with mucosa that was restricting the nasal passage by causing elevation in the left nasal cavity base was observed in the anterior rhinoscopy. In the paranasal sinus computed tomography (CT) and magnetic resonance (MR) imaging, an

ovoid, well-contoured, osseous, non-destructive mass with soft tissue density was observed on the upper jaw anterior in the subcutaneous fat tissue with dimensions of 20×13 mm on the right and 26×22 mm on the left (Figure 1, 2). The patient underwent bilateral nasolabial cyst excision with the sublabial approach under general anesthesia (Figure 3, 4).

Partially-encapsulated cystic tissues with soft consistencies, the largest one with dimensions of 20×15×15 mm and the smallest one with dimensions of 17×15×5 mm, were observed in the histopathological examination. In the histopathological sections, hematoxylin-eosin, pan-cytokeratin, and periodic acid-Schiff staining were performed and occasional fibrocollagenous cyst walls surrounded by pseudostratified columnar epithelium that included squamous metaplasia regions were observed (Figures 5, 6). Histopathological examination was reported as a bilateral nasolabial cyst. The patient did not develop any post-operative complications, and relapse was not observed in her 1.5-year-long follow up.

A written informed consent was obtained from the patient regarding the pre-operative surgical procedures and the potential use of clinical information,



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examinations, and visual material in educational academic publications.

## Discussion

Nasolabial cysts account for approximately 0.6% of all cysts of the jaws (2, 5). The cysts are generally observed in middle-aged (40-60 year olds) individuals, in women (unilateral cysts 4 times more and bilateral cysts 5.5 times more), and more commonly in Africans (1, 5). Cysts in most patients are unilateral and only 10% are bilateral, as was the case in our patient (3, 4). The demographic data of our patient were compatible with the literature.

Nasolabial cysts grow slowly, manifest as painless swelling in the nasolabial region and superior gingivolabial sulcus, and they cause deletion of the nasolabial folds, deformity in the face, and nasal obstruction due to elevation in the nasal base. Secondary

infections can cause pain (4). Spontaneous rupture into the nasal or oral cavity due to infection can be observed (1, 6) and dentition is usually intact (6).

Nasolabial cysts have non-odontogenic and developmental origins, and there are two theories in the etiology:

1. As a fissural cyst that develops from the embryonic nasal epithelium that is crammed between the maxillary process and medial and lateral processes (3, 6).
2. As a developmental cyst that stems from embryonic nasolacrimal duct residue (5, 7).

Today, the histopathological similarity between the nasolabial cyst wall and the nasolacrimal duct epithelium further validates this theory. Similarly in our patient, pseudostratified columnar epithelium was detected in the cyst wall.

Diagnosis was made by the correlation of clinical and histopathological findings. Bimanual palpation, performed by putting one finger on the nasal base and another on the superior labial sulcus, is a good examination method. Paranasal sinus CT is the best radiological method to reveal the cyst localization, structure, its relationship with surrounding tissues, and bone erosion (3, 4). Bone erosion is not observed in nasolabial cysts, and pressure-related bone resorption in maxilla points to a nasoalveolar cyst (3). In our case, an ovoid, well-contoured, osseous, non-destructive mass was present in the paranasal sinus CT (Figure 1, 2).

Globulomaxillary and nasopalatine cysts, which are intraosseous lesions, nasolacrimal duct cysts, dermoid and epidermoid cysts of oral cavity, and big furuncles of the nasal base must be considered in the differential diagnosis (5, 8).

Methods such as endonasal endoscopic marsupialization and injection of sclerosant substances are reported, but the standard approach is surgical excision with an intraoral sublabial approach (4, 5, 8, 9). Sublabial approach allows the mucoperiosteum to attach to the bone and the healing of soft tissues in physiological layers. Endoscopic marsupialization, on the other hand, causes an air-containing sinus by the attachment of the nasal base with the cyst cavity. Today, sufficient therapeutic results for both approaches have been reported (4, 5). Our preference was excision with a sublabial approach.

Eliminating cosmetic deformity, restoring nasal obstruction, and preventing recurrent infections are the aims of surgical treatment. Due to the close proximity of the cyst to the nasal base, one must pay attention not to develop lacerations in the nasal mucosa (1). Rarely, complications such as fullness in the face, numbness in teeth, infection, and oronasal fistula can develop (4). Postoperative relapse is usually very low and prognosis is good (5, 6, 9). There is no statistically significant difference between sublabial and endonasal endoscopic approaches regarding postoperative relapse (4). Malignant transformation is exceedingly rare and is reported in the literature only once (10).



Figure 1. Paranasal sinus CT coronal section

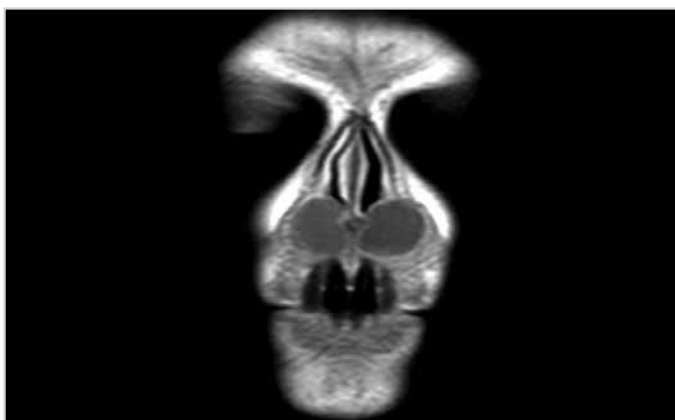


Figure 2. Paranasal sinus MRI coronal section



Figure 3. Revealing the cyst with the sublabial approach



Figure 4. Operative field after cyst excision

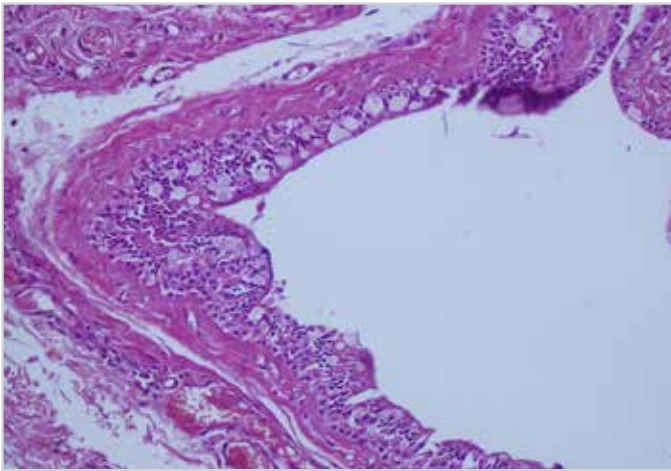


Figure 5. Hematoxylin-eosin staining (200x magnification)

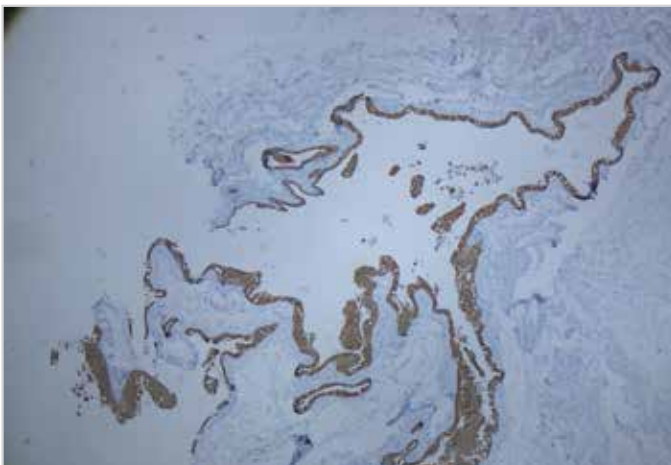


Figure 6. Pan-cytokeratin staining (40x magnification)

## Conclusion

Bilateral nasolabial cysts must be considered in differential diagnosis in patients that are admitted with a facial deformity and cystic mass in the nasal vestibule. Nowadays, excision with the sublabial approach is a widely-used method that has proved to be successful.

**Informed Consent:** Written informed consent was obtained from the patient who participated in this study.

**Peer-review:** Externally peer-reviewed.

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