

Bilateral Nasolabial Cyst: A Rare Case Report with Literature Review

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ABSTRACT

A nasolabial cyst (NLC) is a rare, non-odontogenic cyst, usually located unilaterally in the nasolabial fold. The incidence is increasing in women and adult age groups. Bilateral nasolabial cysts are rare and the number of cases reported in the literature is limited. NLC emerges as a slowly growing painless swelling in the nasolabial region and superior gingivolabial sulcus. It is generally asymptomatic. It may cause wiping in the nasolabial folds, facial deformity, and nasal obstruction as a result of elevation on the nasal base. Magnetic resonance imaging and computed tomography can divulge the cystic character of the NLCs in more elaboration and reliability, their relationships with the nasal alar and maxillary bone, and bone involvement that facilitates the diagnosis. The sublabial approach is the most popular and well-appointed operation, in which a larger surgical area and a full resection are secured further. Here, we report a 21-year-old woman who consulted our clinic with nasal obstruction and face swelling, who was later diagnosed with bilateral NLC upon pathological examination. Unlike its precedents seen in the literature with bilateral NLC, the young age of the patient renders this case unique.

Keywords: Bilateral lesions, nasolabial cysts, non-odontogenic, oral surgical procedures

INTRODUCTION

A nasolabial cyst (NLC) is usually unilateral and more common in women (1, 2). There are very few reports of bilateral cases in the English literature. In this article, a 21-year-old Turkish woman with no other medical condition diagnosed with bilateral NLC with histopathological confirmation is presented, accompanied by radiological imaging findings. The etiology, clinical features, and treatment of rare bilateral NLCs are discussed in the literature. This case is of interest both because it is bilateral and the patient is young.

CASE REPORT

A 21-year-old female was admitted to the department of otorhinolaryngology with complaints of a slowly growing swelling on the upper lip for about a year and nasal obstruction on her left side for 3 months.

The patient had no history of surgery, trauma, or congenital anomaly. On examination, there were soft and fluctuant

masses causing fullness in the right and left nasolabial regions and upper gingivolabial sulcus. In the anterior rhinoscopy, masses covered with mucosa were observed, and they were narrowing the nasal passage by leading to elevation on the base of the bilateral nasal cavity (Figure 1). On CT, ovoid and well-circumscribed masses with soft tissue density were observed, together with the dimensions of 12 mm on the right side and 17 mm on the left side. Both lesions had similar signal characteristics on MRI. Lesions were found to be isointense in T1-weighted sequences, and hyperintense in T2-weighted sequences (Figure 2). Under general anesthesia, bilateral NLC excision was performed on the patient with the intraoral approach (Figure 3). Histopathological examination was reported as bilateral NLC. There was no recurrence in the 1-year follow-up of the patient who did not develop complications in the postoperative period. Written informed consent was obtained regarding the surgical procedure and the patient's clinical information, examinations, and visual material which could be used in academic publications for educational purposes.

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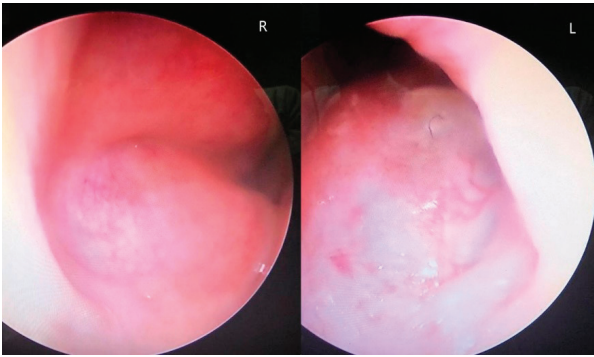


Figure 1: Preoperative endoscopic view of internal nasal valve area; masses covered with mucosa were observed, and they were narrowing the nasal passage by leading to elevation of the base of the bilateral nasal cavity

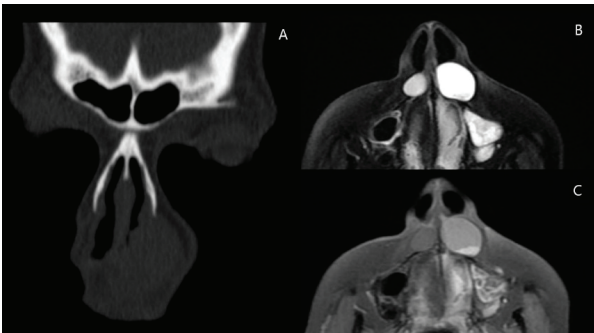


Figure 2: A. Coronal plane of paranasal sinus CT. B. Axial plane of T2-weighted sequences MRI. C. Axial plane of T1-weighted sequences MRI

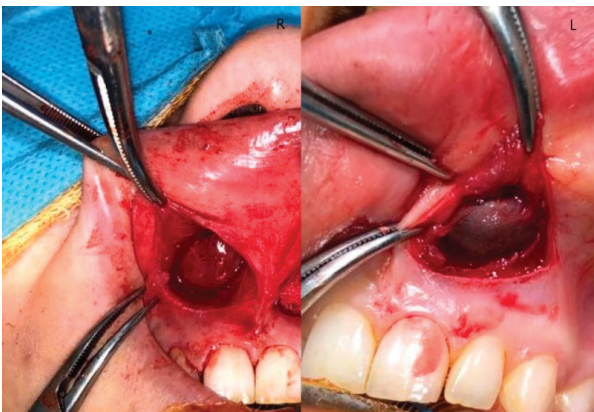


Figure 3: Bilateral NLC can be seen via the sublabial approach

DISCUSSION

NLC is a relatively rare benign, non-odontogenic, and extrasosseous soft tissue lesion (3). NLC was first identified by Zuckerkandl in 1882 (1, 4). NLC accounts for less than 1% of jaw cysts and about 2.5% of non-odontogenic cysts (1, 2, 4). It is usually unilateral and more common in women. It is mostly observed in the fourth and fifth decades (1, 2, 4). Although

very rare, cases can occur bilaterally. It is predicted that approximately 10-11% of cases are bilateral (1, 2, 4). This lesion is rather encountered in African-Americans (1, 2). There are two main theories related to NLC pathogenesis. The first theory claims that during the development of the facial skeleton, cysts arise from epithelial cells remaining in the mesenchyme after the medial and lateral nasal prominences fuse with the maxillary prominence, and then emerge as an inclusion cyst. The second theory proposes that cysts arise from epithelial remnants of the nasolacrimal duct.

Histopathological similarities between the NLC wall and the nasolacrimal duct epithelium cause the second theory to be more valid today (5). Although pseudostratified columnar epithelium is the most common type of epithelium detected in NLCs, differences can be observed. Goblet cells are seen in the mucosal tissue in approximately half of the cases. (6, 7). Inflammatory cells and collagen-rich fibrovascular tissue form the cyst wall (2, 7). NLC is located in the nasolabial region and superior gingivolabial sulcus. There is usually no pain in the swellings caused by NLCs in these regions. It is generally asymptomatic. It may cause wiping in the nasolabial folds, facial deformity, and nasal obstruction as a result of the elevation of the nasal base (1). If the cyst is infected, pain may occur. In addition, rupture can be seen in infected cysts. In this case, the cyst content may drain into the oral or nasal cavity. (8). In the examination of cysts with the bimanual palpation method, the fingers should be placed on the nasal base and superior labial sulcus. CT and MRI facilitate diagnosis by detecting the cystic structure and its localization. It also reveals the relationship of the lesion with the bone structures in a detailed and reliable way (2). On CT, they are described as well-circumscribed, low-density lesions which are located in the anterolateral side of the pyriform aperture and do not exhibit bone invasion. On MRI, they are seen as medium-intensity in T1-weighted sequences and as hyperintense homogeneous lesions in T2-weighted sequences (8). Differential diagnosis includes other cystic formations such as nasopalatine cysts, periodontal abscesses, benign and malignant soft tissue tumors, and large furuncles at the base of the nose (9). Facial deformity or infection of the cyst constitutes surgical indications. Although many different techniques such as aspiration and drainage are used in the treatment of NLC, surgical excision of the cyst is recommended because of the high recurrence rates in these techniques. (4, 9). For this reason, surgical excision with intraorally performed sublabial incision, which allows complete excision of the cyst, is the most preferred treatment method. After sublabial excision, swelling, pain, hematoma, infection, or oroantral fistula can be observed on the face. Additionally, loss of sensation in the teeth and gingiva and numbness can be counted among the other complications (9).

CONCLUSION

Our patient is unique because it is presented at a younger age than patients seen in the literature with bilateral NLC (Table 1). NLC should be considered in the differential diagnosis of masses that cause facial deformities. In addition, if the cyst is infected,

Table 1: Summary of case reports of bilateral nasolabial cysts

References	Age	Sex	Major Complaint	Size of Right NLC	Size of Left NLC	Surgical Approach
Sato et al., 2016 (2)	67 yo	Female	FS	12 mm	25 mm	Sublabial
Marrcoviceanu et al., 2009 (4)	48 yo	Female	FS	22 mm	22 mm	Sublabial
Dghoughi et al., 2017 (10)	30 yo	Female	FS	19 mm	18 mm	Sublabial
Setukumar et al., 2015 (11)	36 yo	Male	FS	25 mm	23 mm	Sublabial
Parwani et al., 2013 (12)	69 yo	Female	FS	30 mm	15 mm	Sublabial
Our case	21 yo	Female	FS, NO	12 mm	17 mm	Sublabial

NLC: Nasolabial cyst, yo: Years old, FS: Facial swelling, NO: Nasal obstruction, mm: Millimeters

it should be differentiated from inflammatory masses in this region. Today, excision performed with an intraoral approach is a successful and preferred treatment method.

Informed Consent: Written informed consent was obtained regarding the surgical procedure and the patient's clinical information, examinations, and visual material which could be used in academic publications for educational purposes.

Peer-Review: Externally peer-reviewed.

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