

Case Report

Infected nasolabial cyst: A rare entity with unusual presentation

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Abstract Cystic lesions of the anterior maxilla and ala of the nose are both odontogenic and nonodontogenic. Nasolabial cyst is an uncommon cystic lesion in this location, which clinically presents with progressive cystic swelling and nasal obstruction. Diagnosis is based on clinical/radiological findings and confirmed by histopathological examination of the excised cyst. Herein, we present a case report of nasolabial cyst in a 50-year-old female who presented with swelling over anterior maxilla.

Keywords: Ala of the nose and anterior maxilla, nasolabial cyst, nonodontogenic cyst

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INTRODUCTION

Nasolabial cysts, also known as nasoalveolar cyst, nasovestibular cyst, and nasoglobular cyst, are rare nonodontogenic cysts occurring in the maxillofacial region.^[1] These were originally described by Zuckerkandl in 1882.^[2] However, Klestadt did an extensive study on nasolabial cysts; hence, it is also called as Klestadt's cyst.^[3] The lesion is submucosal and extraosseous; it expands via the gingivobuccal sulcus and expands all the soft tissues outward.

Clinically, a patient presents with a slow-growing, painless, fluctuating nasolabial mass. Final diagnosis is made after histopathological examination of the specimen.^[4]

Herein, we present a case of an infected nasolabial cyst in a 50-year-old female clinically diagnosed as simple cyst.

CASE REPORT

A 50-year-old female presented to the otorhinolaryngology department with complaints of swelling over the right cheek and pain for the past 15 days. There was no history of fever, nasal bleeding, discharge, or nasal blockage. The patient had a history of similar episode 1 year back, for which she took medications (antibiotics and anti-inflammatory drugs) and swelling subsided. There was no other significant past history.

On general examination, pallor was present. There was no palpable regional lymphadenopathy. Local examination revealed a 2 cm × 2 cm boggy swelling present over the right sublabial region and right lateral wall of the nasal cavity. Overlying skin was indurated. Swelling was tender and warm to touch. Systemic examination was within normal limits. Complete blood count revealed low hemoglobin (10.2 g/dl). Other

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hematological and routine biochemical parameters were within normal range.

Diagnostic nasal endoscopy revealed medially rotated lower half of the right nasal cavity wall. Ultrasonography showed a 27 mm × 18 mm simple cyst in the subcutaneous plane which was adjacent to right ala of the nose.

Noncontrast computerized tomography scan showed evidence of a well-circumscribed nonodontogenic cystic lesion measuring 2 cm × 1.8 cm adjoining the right ala of the nose and compressing the right maxillary wall [Figure 1].

The patient underwent nasolabial cyst excision under local anesthesia. A sublabial incision was given; cyst wall ruptured and around 10 ml of pus-like fluid was aspirated. The nasolabial cyst was excised completely and sent to the histopathology department for further evaluation. Histopathological examination revealed a cyst lined by pseudostratified ciliated columnar epithelium with interspersed mucinous goblet cells [Figure 2a]. Cyst wall was composed of fibrocollagenous tissue and few thin-walled blood vessels [Figure 2b]. Hence, a histopathological diagnosis of the nasolabial cyst was rendered.

DISCUSSION

Nasolabial cysts are rare cystic lesions of the maxillofacial region, accounting for 0.7% of all the cystic lesions and 2.5% of nonodontogenic cysts.^[5] They generally occur in the fourth to fifth decade of life, with a male-to-female ratio of 4:1.^[6] Our case was in a 50-year-old female.

These cysts are mostly unilateral; however, bilateral nasolabial cysts have also been reported in the literature.^[6] There is no predilection for side.

Different hypotheses have been proposed regarding the development of nasolabial cysts. The first hypothesis



Figure 1: Noncontrast computerized tomography showing nonodontogenic cystic lesion measuring 2 cm × 1.8 cm adjoining the right ala of the nose

states that, at 4th week of intrauterine life during the fusion of medial and lateral nasal processes, epithelial cells are retained in the mesenchyme giving rise to the cyst.^[3] According to the second hypothesis, cyst develops due to the persistence of epithelial remnants from the nasolacrimal duct, which extends between the lateral nasal process and maxillary prominence.^[7]

Clinically, the patient presents with a slow-growing, painless, cystic mass adjacent to ala of the nose and a swelling at canine fossa, upper lip, gingivolabial sulcus, and nasal vestibule obliterating the nasolabial fold causing cosmetic problems. It can cause nasal obstruction and facial deformity. On bi-digital examination, the swelling is soft, fluctuant, and nontender located between the floor of the nasal vestibule and the gingivolabial sulcus. Secondary infection can lead to pain and tenderness around the swelling.^[5] Sometimes, it can erode the adjacent bony structures such as maxillary alveolus, leading to displacement of the tooth. Cohen and Hertzanu reported a case of the nasolabial cyst that resulted in the erosion of maxillary alveolus and invaded the supporting structures in the region of incisor teeth, leading to its displacement.^[8]

In the literature, malignant transformation has not been documented in the nasolabial cysts. However, one case of nasolabial cyst with extensive apocrine change is reported.^[9]

Differential diagnosis of the nasolabial cyst includes both odontogenic and nonodontogenic cyst of the anterior maxilla or ala region. Radicular cyst, dentigerous cyst, odontogenic keratocyst, periapical abscess, dermoid cyst, and epidermoid cysts are the few most common cystic lesions, which have to be differentiated from nasolabial cysts.^[7]

Radiological imaging using CT and magnetic resonance imaging can help to localize the lesion and comment upon the cystic nature of the lesion and its extension in the surrounding bone.

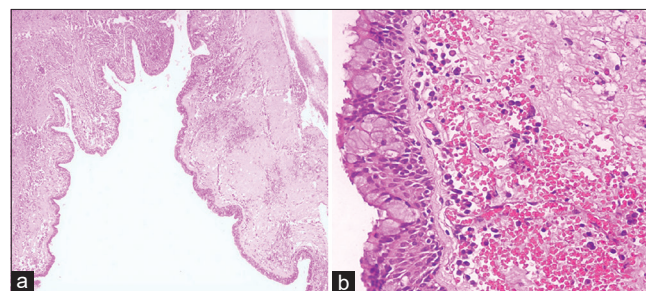


Figure 2: (a) Cyst lined by pseudostratified ciliated columnar epithelium (H and E, ×100). (b) Interspersed mucinous goblet cells in the cyst lining (H and E, ×400)

Histopathology of the lesion was first described by Brown-Kelly.^[10] The cyst is lined by pseudostratified ciliated columnar epithelium with goblet cells. Squamous metaplasia can occur in the cyst lining. Stroma is composed of chronic inflammatory infiltrate. Nasolabial cysts show striking similarity to the physiologically encountered epithelium in the lacrimal drainage system, specifically the lacrimal canaliculi, sac, and the nasolacrimal duct as these are lined by nonkeratinizing squamous epithelium (canaliculi) to cuboidal and columnar epithelium containing interspersed mucus-secreting goblet cells.^[11]

Different treatment modalities have been tried for nasolabial cyst such as injection of sclerotic substance and marsupialization. However, complete resection of the cyst through a transoral or translabial approach is treatment of choice as these lesions can reoccur. Complete excision also helps to address the cosmetic problems. Furthermore, it facilitates histopathological examination of the cyst for confirmation of diagnosis. However, complications such as hematoma, soft tissue swelling, wound infection, and oronasal fistula may occur.^[12]

The unique nature of nasolabial cysts lies in the rarity of this lesion, lack of diagnostic clinical and radiologic findings and histopathologic resemblance to epithelia in the lacrimal drainage system which make diagnosis difficult. However, accurate diagnosis is crucial in view of locally aggressive nature and recurrence following incomplete excision.

To conclude, nasolabial cysts are rare, benign, extraosseous, nonodontogenic cysts. Although rare, these cysts must be differentiated from other odontogenic cysts. Clinical examination in conjunction with radiological imaging helps in diagnosing these lesions. However, histopathological examination is necessary to confirm the diagnosis. Hence, while dealing with the cysts of anterior maxillary region

and ala of the nose, nasolabial cyst should be kept in the differential diagnosis for the appropriate management and accurate diagnosis of the same as these cysts carry risk of recurrence.

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Conflicts of interest

There are no conflicts of interest.

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