

A case report on a nasolabial cyst presenting with a nasolacrimal sac cyst

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Abstract

Nasolabial cysts are rare, nonodontogenic soft tissue developmental cysts that occur in the maxillary lip and nasal alar regions. Patients with this type of cyst generally presents with an asymptomatic soft swelling that may obliterate the nasolabial fold, elevate the nasal ala or the floor of the nose and fill the labial vestibule intraorally. The exact origin of nasolabial cysts is uncertain. The seed theory suggests that these cysts develop from a misplaced epithelium of the nasolacrimal duct because of their similar location and histologic appearance. This report aimed to present a case of nasolabial cyst presenting with a nasolacrimal sac cyst.

Key words: Nasolabial cyst, nasolacrimal sac cyst, nonodontogenic cyst

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Introduction

Nasolabial cysts are rare, nonodontogenic soft tissue developmental cysts that occur in the maxillary lip and nasal alar regions. The swelling may obliterate the nasolabial fold, and fill the labial vestibule intraorally.^[1]

Plain radiograms do not show this lesion except when it causes significant maxillary bone erosion. Computed tomography (CT) and magnetic resonance imaging (MRI) may reveal the cystic nature and enlargement of this lesion, as well as its relation to the nasal and maxillary bones, expediting and easing the diagnosis.^[2]

This report aimed to present a case of nasolabial cyst presenting with a nasolacrimal sac cyst.

Case Report

A 70-year-old man presented with painful lip swelling and nasal asymmetry. Medical history revealed that the patient had prostate cancer. These symptoms had been evident for approximately 1-month, and the swelling had been slowly

enlarging. Clinical examination showed an ovoid mass under the medial end of the nasolabial fold. On palpation, the lesion was soft, fluctuant and mobile.

No anomalies were noted on periapical, occlusal and panoramic radiography.

Axial and coronal CT scan with contrast revealed an extensive, ovoid, well-circumscribed extraosseous hypodense soft tissue lesion (with a slight soft tissue enhancement of the periphery) at the right alar base lateral to the piriform aperture [Figure 1a-c]. The lesion measured 2.3 cm in diameter and had a clear and well-defined outline. Although bone invasion is not a feature of this type of cyst, bone erosion was observed on the patient because of superficial pressure resorption. The radiographic margins of the lesion appeared smooth and noninfiltrating.

Magnetic resonance (MR) images (noncontrast because of the patient's history of allergy to contrast material) revealed

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an ovoid lesion located in the soft tissue, hypointense in T1-weighted and hyperintense in T2-weighted [Figure 2a and b]. The diagnosis was nasolabial cyst. In addition, CT and MR images showed a 1 cm cystic enlargement of the left nasolacrimal sac [Figure 3a and b]. Moreover, the expansion in the nasolacrimal duct system of the right nasolabial cyst superior was to draw attention. The cystic enlargement was asymptomatic.

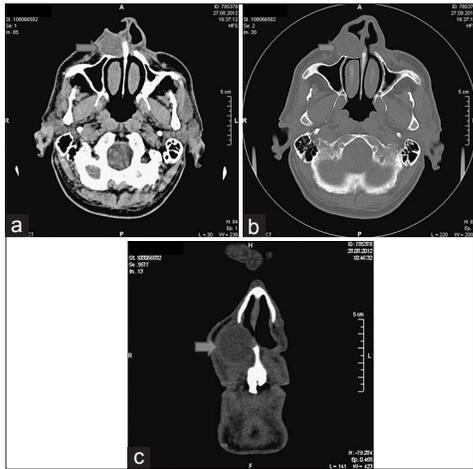


Figure 1: Nasolabial cyst (arrows) shown in axial computed tomography (CT) image slices using (a) Soft tissue algorithm (b) Bone tissue algorithm. (c) Coronal CT image of the nasolabial cyst

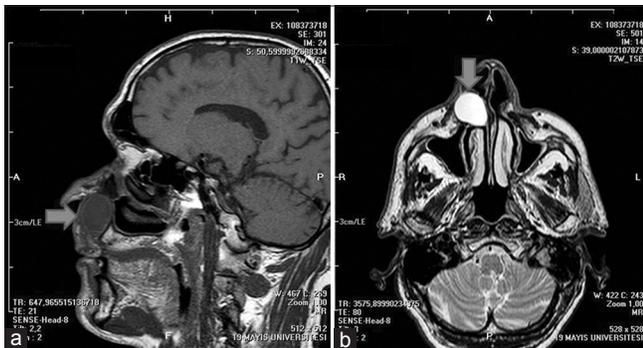


Figure 2: Magnetic resonance (MR) images of the nasolabial cyst (arrows). (a) Sagittal MR image using T1-weighting, (b) Axial MR image using T2-weighting

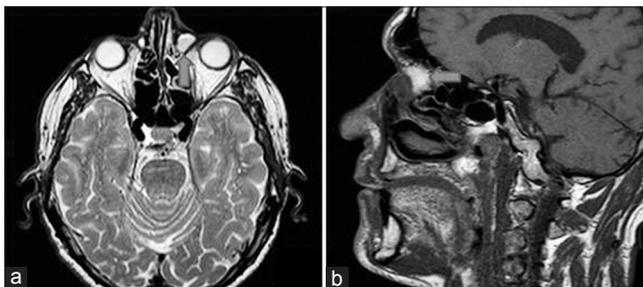


Figure 3: Magnetic resonance (a) T1-weighted sagittal (b) T2-weighted axial images showing a 1 cm cystic lesion in the left nasolacrimal sac. (arrows)

The patient was directed to the ear, nose and throat department for the treatment of infected nasolabial cyst. Our patient preferred to undergo intervention local anesthesia, although we proposed total surgical excision an under general anesthesia. Intraorally, sublabial soft and fluctuant right cysts were observed. Ten milliliters yellowish serous fluid was aspirated from the cyst with a fine needle. Aspirated material was sent for pathologic evaluation. Extremely cellular, foamy histiocytes and leukocytes were observed in biopsy specimen.

Discussion

The exact origin of nasolabial cyst is uncertain. Two theories have been put forward regarding its pathogenesis. According to one theory, it may be a “fissural” cyst arising from epithelial rests trapped along the line of fusion of the maxillary, medial nasal and lateral nasal processes. The other theory indicates that the source of epithelium may be from the embryonic nasolacrimal duct, which initially lies on the bone surface.^[3]

In the coronal MRI imaging, an expansion is seen in the right nasolacrimal duct. We are of the opinion that this expansion in the duct’s superior is caused by the pressure of nasolabial sulcus cyst on the duct. On the left, we see that the lacrimal sac is enlarged (lacrimal sac cyst). The presence of these two pathological manifestations (nasolacrimal duct expansion on the right and lacrimal sac cystic expansion on the left) in the same case causes us to think that it is more probable for lacrimal system problems to be included in the etiology in the formation of nasolabial sulcus cysts. This interaction is bilateral. Starting from embryological period, secondary nasolabial sulcus cysts to nasolacrimal system pathologies may develop, and nasolacrimal duct and nasolacrimal sac problems may develop secondary to the pressure of nasolabial sulcus cysts in time. Since these findings in the nasolacrimal system did not give symptoms in our case, the results of the images were determined incidentally. According to the general opinion and our clinical experience nasolabial cyst does not cause any displacement of the around structure and teeth. However, Cohen and Hertzanu^[4] have reported a case of nasolabial cyst with a huge growth potential that resulted in the erosion of maxillary alveolus, invaded supporting structures and caused the displacement of teeth. This situation supports our view that nasoalveolar cysts may cause pressure and destruction in lacrimal system.

Nasolacrimal mucoceles, which are also known as congenital nasolacrimal cysts of the duct drainage system, are caused by failure of the canalization, or obstruction, of the nasolacrimal duct. They commonly appear in infancy, along with the dacryocystitis, epiphora or intranasal mass

with respiratory distress.^[5] The clinical presentation and location of these lesions are distinct from those of nasolabial cysts. The present case of a 70-year-old patient diagnosed with an asymptomatic nasolacrimal sac cyst is an interesting one.

Differential diagnosis is conducted on periapical inflammatory lesions, such as granuloma, cyst or abscess, and aggressive developmental odontogenic lesions, such as keratocyst, developmental gingival cyst of the adult, epidermoid or epidermal inclusion cyst, mucous extravasation cyst and salivary gland neoplasms arising from minor salivary glands.^[6] CT and MRI are important examinations for diagnosis in suspected cases of nasolabial cyst. MRI reveals cyst contents more clearly than CT. The diagnosis of nasolabial cysts should be on the basis of clinical and imaging method findings.^[2] In the present case, plain radiographs did not show any detectable changes, and related teeth had a positive response to vitality testing, indicating that the lesion did not have an odontogenic origin. CT and MRI revealed an ovoid cystic lesion located in the soft tissue.

The presentation of nasolabial cyst and nasolacrimal sac cyst in the same patient is extremely rare. To the best of our knowledge, no such case has been reported in the literature.

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