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OLGU SUNUMU/CASE REPORT

Nasolabial cyst: imaging findings

Nazolabial kist: görüntüleme bulguları

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Abstract
Nasolabial cysts are rare nonodontogenic lesions of the maxillofacial area. Other odontogenic and non-odontogenic masses should be taken into consideration in definitive diagnosis. In this case report, ultrasonography, computed tomography and magnetic resonance imaging findings of a nasolabial cyst in a 32-year-old male patient were presented with the literature.
Key words: Nasolabial cysts, computed tomography, magnetic resonance imaging, calcification

Öz
Nazolabial kistler, maksillofasiyal bölgenin nadir rastlanan nonodontojenik lezyonlarıdır. Ayırıcı tanıda diğer odontojenik ve non-odontojenik kitleler göz önünde bulundurulmalıdır. Bu olgu sunumumuzda, 32 yaşında erkek hastada rastlanan nazolabial kistin ultrasonografi, bilgisayarlı tomografi ve manyetik rezonans görüntüleme bulguları literatür eşliğinde sunulmuştur.
Anahtar kelimeler: Nazolabial kist, bilgisayarlı tomografi, manyetik rezonans görüntüleme, kalsifikasyon.

INTRODUCTION

Nasolabial cysts are rare, non-odontogenic soft tissue lesions and they make up 0.7% of all cysts of the jaw[1]. Although they may occur at any age, they are more common in women, in fourth and fifth decades and on the left side of the face[2]. Its pathogenesis is not known for sure. It was thought to result from inflamed mucous glands; however, it has recently been suggested that it develops as a result of embryonal cell residues related with nasolacrimal canal[3].

Nasolabial cysts are mostly located on upper lip and nasal vestibule. As long as they are not infected, they generally cause swelling without pain and they can rarely cause nasal obstruction. Typically, they cause swelling in canine fossa, upper lip, gingivolabial sulcus, nasal ala and nasal vestibule[2]. Cysts may get bigger to cause removal of nasolabial folds and swelling in nasal ala. Computerized tomography (CT) is important in diagnosis. Although they are seen as extraosseous located soft tissue cysts, sometimes they may cause bone erosion[4]. In definitive diagnosis, infections of the nasolabial area or other mass lesions should be taken into consideration. In this case report, ultrasonography (USG), CT and MRI findings, diagnosis and treatment of a nasolabial cyst case were discussed with the literature.

CASE

Thirty two-year-old male patient was admitted to otorhinolaryngology clinic with complaints of swelling and blockage on the left side of his nose. He stated that he had these complaints for three years; however, the complaints had increased during the past year. His examination in the otorhinolaryngology clinic revealed a mobile soft mass lesion on the left nasoalveolar localization which removed the nasolabial sulcus, well-demarcated with palpation with a smooth surface and with a size of approximately 3x2.5 cm. Anterior rhinoscopy showed that the lesion narrowed the air

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passage from the lateral nasal wall in the right nasal vestibule base and lower concha anterior.

Superficial USG performed for the distinction of cyst-solid showed anechoic cystic structure with a smooth contour and thin wall. Paranasal sinus CT and craniofacial MRI were performed to determine the borders of the lesion and its relationship with the adjacent tissues. CT examination showed hypodense nodular lesion on the left nasolabial area with a smooth contour, homogeneous internal structure and a focal calcification focus on the inferior wall (18 HU). Secondary to mass effect, it was seen to be narrowed at left nasal passage inferior and displaced at lower concha anterior medial. No destruction was found in the adjacent bony structures (Figure 1). MRI showed cystic lesion of intermediate intensity at T1A sequence and hyperintense cystic lesion with homogenous internal structure at T2A sequence in the nasolabial area. Lesion borders were distinguished from the adjacent soft tissues (Figure 2).

With a prediagnosis of nasolabial cyst, the patient underwent surgery with sublabial approach under general anesthesia. During the operation, it was found that the cyst wall was attached to the nasal mucosa and secondary to this, an orifice was seen to form at postop nasal mucosa. Postop was left to secondary healing with one week long compressive dressing. Total recovery was seen in the first month follow-up. No complications developed in the follow-ups. Pathology result reported cyst lined by pseudostratified prismatic epithelium the surface of which contained squamous metaplasia in an area. Aerob or anaerob reproduction was not found in microbiology culture.

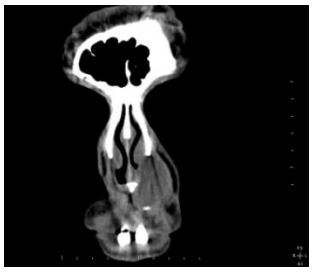

Figure 1. In paranasal CT examination, smooth lined hypodense lesion narrowing the nasal passage in the left nasolabial area. Focus of focal calcification on the inferior wall of the lesion.

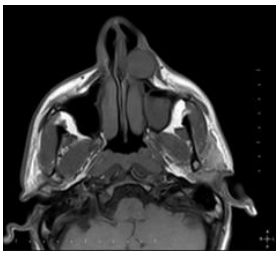

Figure 2a. Axial MRI-T1; smooth lined lesion of intermediate intensity in the left nasolabial area

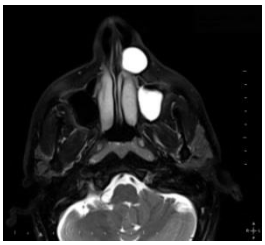

Figure 2b. Axial MRI-T2; the lesion has homogenous hyperintense appearance. Pressure to the left inferior concha from the anterior.

Figure 2c. Sagittal MRI-T2; Smooth lined hyperintense lesion can be clearly distinguished from the adjacent tissues. Pressure to the inferior concha from below.

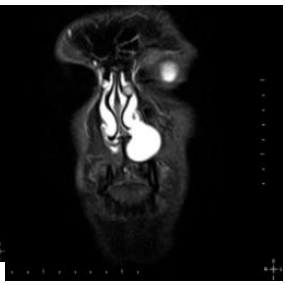

Figure 2d. Coronal MRI-T2; Extension of the hyperintense lesion to the nasal cavity and narrowing in the nasal passage.

DISCUSSION

Nasolabial cyst was first defined by Zuckerkandl in 18821. Names like nasoalveolar cyst, mucoid cyst, subalar cyst, nasal vestibular cyst and nasal wing cyst have been used for nasolabial cyst. However, the most common use in literature is nasolabial cyst[4].

Although the pathogenesis of nasolabial cyst is not known for sure, the view that it is a "fissural cyst" which is formed as a result of the defect in the fusion of medial nasal wall, lateral nasal wall and maxillary process between the 4-8th weeks of intrauterine is common[1]. Usually one-sided and is more common on the left side of the face[2]. In our case, the lesion was on the left and unilateral and it was in parallel with the literature.

Nasolabial cysts are clinically asymptomatic in general. Symptomatic patients may show local pain,

and asymmetric swelling on the wings of the nose and on the face. El-Hamd defined nasolabial cyst as a swelling which got bigger slowly and without pain in 3-5 years and mentioned nasal blockage and cosmetic problems among the complications[2]. Bull et al. reported that cystic mass which formed a swelling in the nasolabial area was a typical finding for nasolabial cyst[5]. In our case, our patient's complaints on admission were facial asymmetry and swelling on the left side of the nose, in parallel with the literature. Although he had complaints for 3 years, his complaints had increased for the past year and air passage had narrowed on the left side.

Histopathologically, nasolabial cyst has fibrous capsule, it includes yellowish transparent fluid, pseudo multilayered cutaneous columnar epithelium and goblet cells and sometimes multi layered flat epithelium. Focal squamous metaplasia and broad apocrine changes have been reported[6]. Our case was reported as cyst lined by pseudostratified prismatic epithelium the surface of which contained squamous metaplasia in an area.

Nasolabial cysts have a high risk of being infected since they are anatomically close to the mouth and the nose area. As outset symptoms, cyst infection and related complaints can be seen[7]. No reproduction was found in the aerob and anaerob cultures of our case.

The diagnosis of nasolabial cysts are made through clinical and histopathological findings. Through imaging techniques such as USG, CT and MRI, cyst localization, its content and its association with the adjacent tissues can be assessed. Akinbami et al[8]. reported that USG is valuable in the definitive diagnosis of cysts, tumors, hemangioma and soft tissue swellings in the cervicofacial area. In our case, as first imaging technique for the soft tissue swelling that caused asymmetry, USG examination was made and cystic content was found. CT and MRI were made to assess its association with the adjacent tissues. In CT, bone erosion can sometimes be seen in the anterior maxillary buccal cortex. This finding probably develops as a result of the long term pressure of the cyst, especially if the cyst is big[9]. No bone erosion was found in the paranasal CT examination performed on our case. Focal calcification focus was found on the inferior wall of the lesion and to our knowledge, wall calcification has not been previously reported in literature. Pruna et al. reported intermediate intense at T1 weighted sequence, hyperintense at T2 weighted sequence and hypointense on the lesion border[10]. Aquilino et al. found hyperintense signal at T1 and T2 weighted sequences and stated that the hyperintense appearance at T1 weighted sequence was due to the protein content of the cyst[3]. In our case, in line with the literature, intermediate intense at T1 weighted sequence and hyperintense signal at T2 weighted sequence was seen.

For its definitive diagnosis, slowly growing, soft, painless neoplastic, progressive, odontogenic and nonodontogenic lesions with benign appearance should come to mind. Periapical inflammatory lesions such as granulation, cyst and abscess can erode the bone and can merge with this lesion. Non-odontogenic epidermoid or epidermal inclusion cysts can cause similar clinical picture[7]. In definitive diagnosis, nose base furuncle, facial cellulite and acute maxillary sinusitis should also be considered[8].

For these cysts, standard treatment option is surgical resection with sublabial approach[7]. Compressive dressing should be required for the potential space that forms after surgical resection not to be filled with hematoma or seroma. Cyst excision with sublabial approach was performed on our case. Compressive dressing was made postop for one week. No complication developed in follow-ups.

As a conclusion, nasolabial cysts are rare nonodontogenic lesions. The diagnosis is made with radiological and histopathological examinations. Additional imaging techniques are required for definitive diagnosis. Radiological imaging techniques are important in making definitive diagnosis, planning the treatment and determining the surgical limits. In our paper, we presented the imaging findings of a patient diagnosed with nasolabial cyst in line with the literature and shared our knowledge about the diagnosis and treatment of such cases.

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