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### A rare case of nasolabial cyst; A case report

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#### Abstract

Nasolabial cyst is a rare nonodontogenic, soft-tissue cyst occurring in the sublabial area and anteriormaxillary region. The nasolabial cyst is classified as a fissural cyst, found outside the bone, and on the region corresponding to the nasolabial furrow and alar nose. This cyst is frequently asymptomatic with the most usual sign being alar nose elevation. In spite of the low occurrence of nasolabial cysts, it is important to recognize the clinical characteristics of this lesion. The patient usually presents with a slowly enlarging asymptomatic swelling. They are usually diagnosed in early stages because of cosmetic problems. In our paper we report a *nasolabial cyst* of a 73-year-old woman and discuss the diagnosis, differential diagnosis, and treatment with light with the literature available.

**Keywords:** cyst, maxillary, nonodontogenic, swelling

#### 1. Introduction

The nasolabial cyst is a rare non-odontogenic cyst originating in maxillofacial soft tissues. The lesions cause painless swelling in sublabial fold, lips, face and cause nose obstruction. Pain can occur if the cyst becomes infected. The incidence of the cyst is 0.7% in overall chin cysts [1]. The initial diagnosis, and treatment is usually made in early stages because the lesion causes cosmetic problems; very rarely it becomes large in dimensions. According to Allard [1], this lesion was first described in 1882 by Zuckerkandl, and since then, two main etiological theories have been proposed. One holds that the lesion arises from trapped nasolacrimal duct tissue [2], and the other affirms that it is an embryonic fissural cyst [3]. Klestadt [4] first postulated an embryologic origin for these cysts and considered that these lesions must originate from embryonic epithelium, entrapped in the developmental fissures between the lateral nasal and maxillary processes. Since then, many authors have classified this entity based on Klestadt's embryologic theory as a fissural cyst [5]. This lesion presents an extra osseous location in the region of the nasolabial fold and can cause swelling in the furrow, alar nose elevation and upper lip projection [3]. Despite the uncommon occurrence of nasolabial cysts, it is important to recognize the characteristics of this lesion. Herein we present diagnosis, differential diagnosis and treatment of a nasolabial cyst in the lights of the literat

#### 2. Case Report

A 73 year old female patient presented to the department of Oral and maxillofacial Pathology, Darshan Dental College with chief complaint of swelling in the left side of upper lip region since 4 months which was gradual in onset. Patient had difficulty in wearing dentures. No secondary symptoms like pain and fever were seen. There was no aggravating and relieving factor associated with it. Patient was hypertensive and under medication since 5 years. Patient was edentulous since 12 years. She was wearing dentures since 10 years. In dental history patient was edentulous since 12 years. She was wearing dentures since 10 years. No similar condition was seen in family. On clinical examination there were no abnormality detected related to gait, posture, sclera skin, conjunctiva, hair and extremities and all the vital signs examined were normal. The extraoral examination revealed a solitary diffused swelling present extending from left nasolabial fold to 0.5 cms lateral to midline towards right side measuring about 3/2.5cms (Fig.1). The left solitary sub mandibular lymph node was palpable, enlarged, non tender, measuring about 0.5/0.5 cms round in shape. Intraoral examination showed completely edentulous teeth & periodontium. A solitary diffused swelling was seen extending from edentulous space of 21 to edentulous space of 23 measuring about 3.0/1.5 cms on the

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labial mucosa. The depth of the vestibule above maxillary edentulous ridge super inferiorly, was 3/1.5 cms and the mucosa over the swelling was tensed, colour was bluish red. On palpation Swelling was non tender with borders diffused, soft in consistency and fluctuant swelling. (Fig. 2)



Fig 1: Extraoral view of the patient

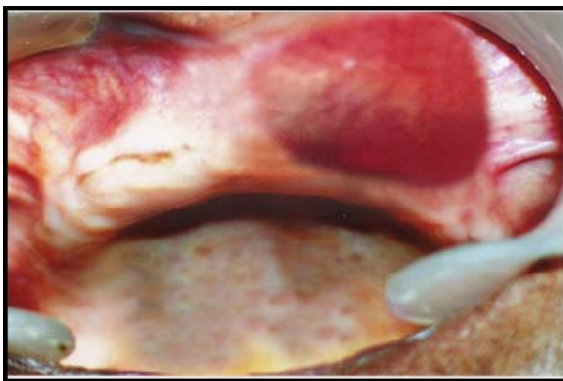


Fig 2: Intraoral view of the nasolabial cyst

**2.1 Provisional Diagnosis**

Nasolabial Cyst

**2.2 Differential Diagnosis**

Residual cyst, Cystic adenoma of minor salivary glands, mucous extra vasation cyst and epidermal inclusion cyst

**2.3 Investigation**

Occlusal radiograph (with and without contrast), FNAC Complete hemogram

**Occlusal radiographs**

Showed a pronounced posterior convexity of one half of the bracket shaped radio opaque line instead of double curve. (Fig.3)

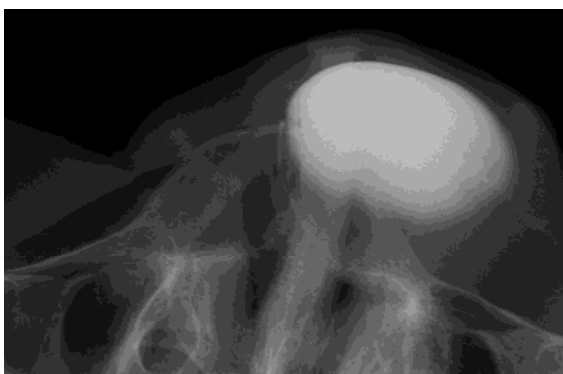


Fig 3: Occlusal view showing radiopacity

**FNAC**

Showed yellow colored fluid which was blood tinged (Fig.4)

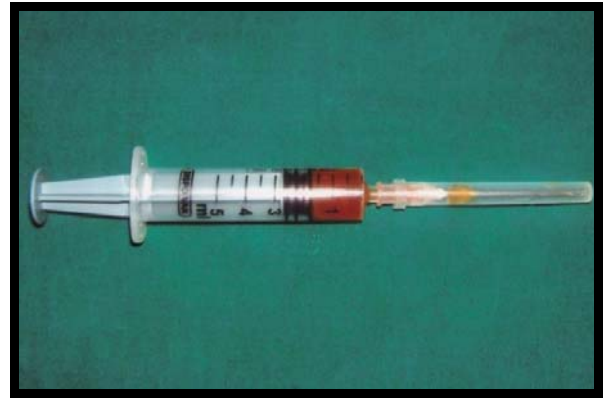


Fig 4: FNAC

**Histology**

Cavity most commonly was lined by pseudo stratified columnar epithelium surrounded by a connective tissue. However squamous epithelium as well as areas with simple cuboidal epithelium were observed. Occasionally contained adipose tissue, skeletal muscle, nerve bundles, vascular spaces cartilage or muscle cells. (Fig. 5)

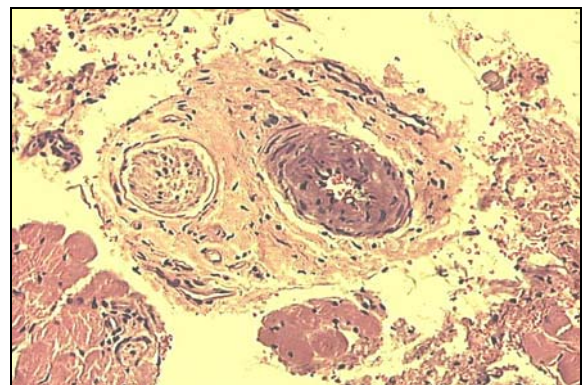


Fig 5: Histological view

**2.4 Final Diagnosis**

Nasolabial Cyst

**3. Discussion**

Nasolabial cyst is a rare soft tissue developmental epithelial cyst. Occurs in the region of maxillary lip & alar base, lateral midline. It was first described by ZUKERKANDL. Klestadt suggested that nasolabial cyst arises from epithelium entrapped at a point, where maxillary medial and lateral nasal processes fuse. Usually the cysts are seen in the 4th-5th decade of lifetime. The incidence of bilateral cyst is 10% in the literature [6]. There are three theories for the formation of the cyst.

- (1) The cyst is formed embryo logically by detention cells in the maxilla, medial. and lateral nasal wall.
- (2) The cyst is formed embryo logically by detention cells from the inferior nasolacrimal channel redundant cells.
- (3) The cyst is formed embryo logically by detention cells from the inferior nasolacrimal channel endodermal cells
- (4) Exposure to trauma accelerates the formation of the cyst [7].

Most accepted hypothesis is that cyst develops from remnants of the embryonic naso lacrimal duct many names have been suggested for nasolabial cysts, with the nasoalveolar cyst and nasolabial cyst being the two most widely used. Nasolabial cysts represent about 0.7% of all cysts in the maxillofacial

region, and 2.5% of non-odontogenic cysts. Many authors believe that its prevalence is actually higher than presented in the literature; however, due to misdiagnosis, indexes remain low [6].

Nasolabial cysts are usually unilateral, with no prevalence of side occurrence but bilateral cases have been also reported [2]. It has been estimated that approximately 10% of the cases are bilateral [6, 7]. Other significant findings include a greater incidence in females (4:1) and possibly greater prevalence among Blacks [8]. It frequently occurs during middle age [2, 5, 9]. However, in the present study we report a case with female aged 73 years and was asymptomatic.

The clinical findings of the nasolabial cyst are fairly typical. Patients usually complain of a swelling adjacent to the nose, and sometimes the cyst may be observed on routine examination [10, 11]. The development of swelling in the maxillary buccal sulcus may reach great dimensions, causing discomfort with the use of dentures, breathing obstruction and facial asymmetry. In this report, the patient mainly complained of difficulty in denture wearing and upper lip swelling.

Although it is a soft-tissue cyst, the nasolabial cyst can sometimes cause erosion of the underlying maxillary bone which may be observed in radiographic examination [12]. Schroff [13] pointed out that these are not bone lesions and thus detailed radiographic examination must be obtained to distinguish them from odontogenic or other non-odontogenic etiologies [14]. In the literature, rare cases of radicular absorption were observed due to these cysts. However, in the present case, posterior convexity of one half of the bracket shaped radio opaque line instead of double curve with bone resorption was observed similar to other authors [15, 16].

Injection of esclerotic substances, marsupialization and surgical removal may be considered for treatment. However, unlike some of the large intraosseous cysts, this soft-tissue lesion does not respond to marsupialization [17] and surgical excision is the treatment of choice. Because this cyst is usually closely related to the floor of the nose [1, 18], perforation of the nasal mucosa may be expected during its removal. When very small perforations are caused, they can be left untreated, however, larger ones must be sutured [18].

#### 4. Conclusion

Nasolabial cyst must be kept in mind with the differential diagnosis of swellings present at nasal vestibule, nasal base, and sublabial area. The diagnosis and treatment by surgical excision has to be made after establishing and comparing with the differential diagnosis of odontogenic, nonodontogenic cysts of the region. Herein we present a case of a nasolabial cyst and discuss it in the lights of the literature.

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