Nasolabial Cyst Mimicking a Radicular Cyst

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ABSTRACT

Nasolabial cyst is an uncommon nonodontogenic, developmental cyst, originating in maxillofacial soft tissues characterised by its extraosseous location in nasal alar region. This cyst is frequently asymptomatic with most usual sign being alar nose elevation. Its frequency is around 0.7% of cysts of the jaws and 2.5% of the nonodontogenic cyst. A case report of a nasolabial cyst for which a radiographic contrast medium was used in order to localise the lesion is discussed. This article documents the presentation and management of nasolabial cyst in a 50-year-old woman and discusses the considerations related to the diagnosis.

Keywords: Nasolabial cyst, Nonodontogenic cyst, Contrast media, Soft tissue cyst, Klestadt’s cyst.

INTRODUCTION

The nasoalveolar cyst is not found within bone, but usually described as a rare fissural cyst that may involve the bone secondarily. It is developmental, rather than inflammatory, in origin and arise from nonodontogenic epithelium. According to Allard, this lesion was first described in 1882 by Zuckerkandl, and since then two main etiological theories have been proposed. According to first hypothesis, the cyst is derived from epithelial cells retained in the mesenchyme after the fusion of the medial and lateral nasal process and the maxillary prominence at approximately 30 days in utero. The second hypothesis suggests the persistence of epithelial remnants from the nasolacrimal duct extending between the lateral nasal process and the maxillary prominence. It accounts for only 0.7% of cyst of the jaws.

CASE REPORT

A 50-year-old, woman reported to the Department of Oral Medicine and Radiology with a chief complaint of swelling and elevation of left nasolabial region, associated with pain for approximately 20 days, over which time the swelling had been slowly enlarging. On extraoral examination mild asymmetry of the face was noted in relation to the left side of the nasolabial region (Fig. 1). On palpation the lesion was approximately 3 × 2 cm, soft to firm in consistency and tender. Intraoral examination revealed a swelling that had distended the left maxillary labial sulcus. The mucosa overlying the swelling exhibited a bluish tint. The tooth 21 in the vicinity of the swelling appeared discolored. The teeth 11, 12 were vital but 21, 22 were nonvital.

Aspiration was performed with a sterile needle of 0.5 mm and 2 ml of a dirty white turbid fluid was obtained (Fig. 2). On the basis of history and clinical findings, a provisional diagnosis of nasolabial cyst was given, however as the teeth in the vicinity to the swelling were nonvital the clinical differential diagnosis
Intraoral periapical radiograph showed obliterated pulp space in relation to 21 (Fig. 3). Panoramic radiograph showed distortion of the anterior wall of nasal cavity and on the occlusal radiographic examination also a distortion of the anterior wall of nasal cavity was observed (Fig. 4). Since the teeth 21, 22 were discolored and nonvital, strong suspicion of radicular cyst aroused. 2 ml of radiographic contrast medium (Iohexol) was injected to find the definite extension of cyst. A radiopaque oval shaped image was observed on the cephalometric radiograph in relation to the alveolar bone (Fig. 5).

In the same clinical session, the lesion was removed surgically via an intraoral approach. The surgical specimen (Fig. 6) was sent to the oral pathology division, fixed in 10% neutral formalin solution and embedded in paraffin. Sections of 5 um thick were obtained and stained with hematoxylin and eosin. The diagnosis was suggestive of nasolabial cyst (Fig. 7).
Nasolabial cyst mimicking a radicular cyst

DISCUSSION

Nasolabial cyst is synonymous with nasoalveolar cyst, nasal vestibule cyst, nasal wing cyst, mucoid cyst of the nose, Klestadt’s cyst. The nasolabial cysts are usually unilateral, with no prevalence of side occurrence but bilateral cases have been reported. More than 10% of the cases reviewed by Allard were bilateral. Nasolabial cysts are most commonly seen in adults, with a peak prevalence in the fourth and fifth decades of life. A significant predilection exists for women, with a female-to-male ratio of 1:6.5. The nasolabial cysts are usually asymptomatic, unless secondarily infected. The nasolabial cyst usually appears as a swelling of the upper lip lateral to the midline, resulting in the elevation of the nose. The enlargement often elevates the mucosa of the nasal vestibule and obliterates the maxillary mucolabial fold. On occasion, this expansion may result in nasal obstruction or may interfere with the wearing of a denture. The cyst may rupture spontaneously and may drain into the oral cavity or nose.

Nasolabial cyst does not cause any displacement of the teeth. However, Cohen and Hertzanz in 1985 have reported a case of nasolabial cyst with a high growth potential that resulted in the erosion of maxillary alveolus, invaded supporting structures in the region of incisor and caused displacement of these teeth. In the present case there were no signs of displacement. As the nasolabial cysts arise in soft tissues, in most cases there are no radiographic changes. Occasionally, pressure resorption of the underlying bone may occur. Routine intraoral radiographs are not diagnostic for nasolabial cyst but assist in excluding other odontogenic or nonodontogenic cyst.

In this case, an interesting finding was that 21 appeared discolored. IOPA radiograph showed obliterated pulp space, and responded nonvital to electric pulp test. Hence we decided to inject radiographic contrast medium and subsequently take radiographs, preferably two different views at right angle to each other, to provide information in all three-dimensions- height, width and depth of the lesion and thus help in localizing the cyst and also differentiate it from the radicular cyst. Thus the diagnosis requires correlation of the clinical, radiographic and histopathological information. Histopathology of the nasolabial cyst is characterised by pseudostratified lined columnar epithelium, often demonstrating goblet cells and cilia. Areas of cuboidal epithelium and squamous metaplasia are not unusual. Apocrine changes also have been reported. The cyst wall is composed of fibrous connective tissue with adjacent skeletal muscle. Inflammation may be seen if the lesion is secondarily infected.

Complete surgical excision of the cyst via an intraoral approach has been the treatment of choice. Because the lesion is often close to the floor of the nose, it is sometimes necessary to sacrifice a portion of the nasal mucosa to ensure total removal. Recurrence has never been reported. Malignant transformation is rare and has been documented in only one case.

CONCLUSION

As nasolabial cyst is a soft tissue cyst, plain radiography does not depict any characteristic finding. Contrast radiography plays an important role in defining the borders and extent of the cyst, which further helps in diagnosis and treatment planning. It is prudent to make use of this procedure whenever required. However, complications such as secondary infection should be kept in mind.

This report has presented the clinical, radiographic, histopathological features and treatment of a classic nasolabial cyst, as well as a review of diagnostic and management considerations. This lesion should always be considered in the differential diagnosis of soft tissue vestibular swelling in the alar region.

REFERENCES