Nasolabial Cysts: Presentation and Management


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Abstract:

Nasolabial Cyst (Klestadt’s cyst) is a rare non-odontogenic soft tissue fissural cyst. It is characterized by their extra-osseous occurrence and by their constant location under the alae nasi. As a result of enlargement, they may present in the floor of the nose and in the upper labial sulcus of the mouth. The patients usually present with a slowly growing asymptomatic swelling. The aim of our study was to examine the clinical presentations and pathological features of nasolabial cysts, in order to provide information regarding diagnosis and treatment. In our study, we retrospectively analyzed 14 cases for their clinical presentation, pathological findings and treatment results. All patients were treated surgically via a sublabial approach. Except for the intra-operative rupture of the cyst near the maxillary wall in a few cases, we found no difficulty in completely removing any of the nasolabial cysts.

Introduction:

In 1882, Zuckerland first described a nasolabial cyst. The cyst occurs in the nasolabial furrow at the alar base. Brown Kelly described the histological structures of the cyst in 1982. A nasolabial cyst is a soft tissue mass having an epithelial lining and fluid-filled center. It originates from non-otogenic epithelium and may be composed of pseudo-stratified columnar epithelium (PSE), Stratified squamous epithelium (SSE), or cuboidal epithelium (CE). There are two theories on the genesis of the cysts. The first was proposed by Klestadt in 1913 who theorized that the cyst arises from trapped epithelium at the fusion point between the
maxilla, medical nasal wall and lateral nasal process.4 The second theory proposes that the cysts arise from an epithelial remnant from the nasolacrimal duct.3,5,6 This second theory is supported by the finding that most of the cysts are lined by a PSE.

Methods:

This retrospective study was carried out at the Dept. of Otolaryngology-Head and Neck Surgery at M.P. Shah Medical College, Jamnagar, (Gujarat) India. A total of 14 cases of nasolabial cysts were studied. Each patient was investigated in detail with respect to history, clinical examination, histological examination and surgical treatment. Information on the clinical picture, duration of symptoms, size and location of cysts and treatment was obtained from a retrospective review of each patient’s medical records. All patients were monitored via outpatient clinic visits. The duration of follow up ranges from 6 months to 18 months.

Results:

Observations: Out of 14 cases 13 were female and 1 was male, aged from 42 to 53 yrs, mean age was 46.85. The disease was most common in the 4th decade of life.

Size & Sites: The size of the cysts ranged from 1 to 3 cm². The cyst was located on the left side in 8 patients (57.14%) and on right side in 6 patients (42.86%).

Symptoms: The most common presenting complaint was a swelling on the face in the nasolabial region (Figure 1) which was found in 14 patients (100%), along with nasal obstruction in 10 (71.42%), and pain in 6 patients (42.85%). The interval between onset of symptom and the first visit to the ENT clinic ranged from one month to one year.

Treatment: In all patients, surgical excision was done via a sublabial approach. The cyst was dissected by a routine surgical procedure (Figure 2), similar to the removal of any other routine cyst. In all patients, the cyst was ruptured due to its thin wall near the maxillary bone, but the surgeons were still able to completely remove the cyst (Figure 3).

Histo-pathological findings: In 10 patients (71.42%) a pseudo-stratified columnar epithelium (PSE) was found while in 4 patients (28.57%) a stratified squamous epithelium (SSE) was present. Cuboidal epithelium (CE) was found in none.

Followup: A recurrence was not found in any case in a followup period of 6 months to 18 months (0% recurrence rate).
Discussion

A nasolabial cyst is a soft tissue mass arising in an extra osseous location in the region of the nasal alar (see figure to the right). The cyst has also been called a Klestadt’s Cyst,8 nasal vestibular cyst, nasoalveolar cyst and a mucoid cyst of the nose. Although the latter also refers to a cyst that can occur as a complication post rhinoplasty.

Although the origins of the cyst are congenital, it almost always presents during adulthood. Choi,. JH7 in his series of 18 patients, reported the mean age of 42.8 (range 17-67) years. While Z. Zahiruddin8 reported mean age of 43.2 (range 28 to 55) years which is slightly lower than our series that found a mean age of 46.85 (range 43 to 53) years . In our study, nasolabial cysts were more common in females (F: M=13:1), which is consistent with the results reported in the two other studies - See Table 1.

Table 1: Comparison of results with other studies on nasolabial cyst.7,8 PSE: Pseudo-stratified Columnar Epithelium, SSE: Stratified Squamous Epithelium, CE: Cuboidal Epithelium

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<tr>
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<th>Mean Age in Years</th>
<th>Sex</th>
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<th>Symptoms</th>
<th>Pathology Report</th>
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<td>7.14%</td>
<td>92.8%</td>
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<td>N = 14</td>
<td></td>
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<td>57.1%</td>
<td>100%</td>
<td>71.1%</td>
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Nasolabial cysts are usually asymptomatic. The patient presents with a history of a mass or fullness in the nasal labial region and seeks medical care when the cyst becomes infected or causes a significant cosmetic defect. In advanced cases, the cyst can enlarge and encroach upon the nasal cavity causing airway obstruction and even displace the internal nasal structures.

In our report, nasolabial swelling was the most common symptom (100%) which is also comparable to other studies.\textsuperscript{7,8} The cyst is best diagnosed by bimanual palpation by placing a finger in the labial sulcus and the other in the floor of the nose. Differential diagnosis includes neoplastic lesions (salivary gland tumors), odontogenic lesions, bone dysplasias, skin appendage lesions and developmental abnormalities. Diagnosis is aided by radiographic examination showing a radiolucency in the nasolabial region which is separate from dentigenous and bony structures. The preferred method of treatment is surgical excision. In our series, all cases were completely removed via sublabial incision, although ruptures occurred in all cases near the maxillary bone.

**Conclusion**

In conclusion, the 14 cases in our series were clinically similar to each other and surgical excision yielded excellent results. A nasolabial cyst should be considered in the differential diagnosis of patients who have a cystic mass in the nasal vestibular area that is accompanied by swelling, nasal obstruction and/or pain.

**References:**


5) Bruggemann A. Zytan als Folge von Entwicklungsstorungnim Naseneinging. Arch Laryngol Rhinol 1920; 33:01-5

