

KLESTADT'S CYST- A RARE CASE REPORT

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PRESENTATION OF CASE

A 27-year-old female presented with history of swelling in the right nasal floor since 6 months. The swelling was insidious in onset and gradually progressive in size. There was no associated pain or fever. The patient did not have history of tooth pain or dental procedures in the past. On examination, the swelling was soft, fluctuant, non-tender and appeared to arise from the underlying subcutaneous tissue.

Ultrasonography of the region revealed a well-defined, thin walled cystic lesion in the right nasolabial fold. The lesion did not demonstrate colour uptake on Doppler evaluation. There was no evidence of calcification or internal contents within the lesion. CT revealed a well-defined, non-enhancing, hypodense lesion with no evidence of bone involvement or erosion. On MRI, the lesion was uniformly hypointense on T1 weighted sequence and uniformly hyperintense on T2 weighted sequence which was not suppressed on fat suppression sequence.

The lesion was surgically excised with a sub labial approach with no intraoperative leak of the cyst. The Histopathological Examination of the cyst showed the cyst wall to be lined with pseudostratified columnar epithelial cells with goblet cells. However, there was no features of atypia or malignancy.



Figure 1. Axial CT Image Showing the Nasolabial Cyst. Underlying Bone Appears Normal

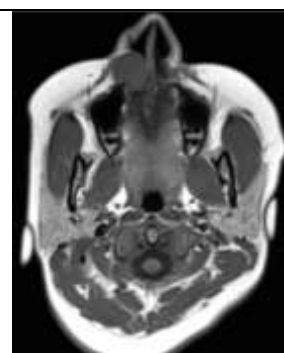


Figure 2. Axial T1 Weighted Image Showing the Hypointense Nasolabial Cyst



Figure 3. Axial T2 Weighted Image Showing the Hyperintense Nasolabial Cyst



Figure 4. Ultrasonography Revealed a Well Defined, Thin Walled Cystic Lesion in The Right Nasolabial Fold. There was No Evidence of Calcification or Internal Contents Within the Lesion. The Lesion Did not Demonstrate Colour Uptake on Doppler Evaluation

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CLINICAL DIAGNOSIS

Dentigerous cyst.

DIFFERENTIAL DIAGNOSIS

1. Odontogenic cyst.
2. Globulomaxillary cyst.
3. Dentigerous cyst.

PATHOLOGICAL DISCUSSION

Also known by the eponym of Klestadt's cyst, nasolabial cyst is an uncommon cystic lesion that arises in the nasal alar region. These are relatively rare lesions, accounting up to just about 0.7% of the cysts in and around the maxillofacial region.¹ Though the lesion was initially not described by Klestadt's, the condition was named after him due to his extensive study on the same.² They are typically classified as non-odontogenic, non-neoplastic cystic lesions.

These are most commonly unilateral (90% of cases) with a statistical predilection to the left side, though the reason for it is unknown.^{3,4} The pathogenesis of nasolabial cyst is not exactly known and is hence debatable. Various theories have been described in the literature pertaining to its development. The first theory presumed it to arise from inflamed mucus glands in the region. The second theory was proposed by Klestadt's which stated that these cysts arise from embryonic epithelium that is entrapped at the fusion area of the medial and lateral nasal processes and the maxillary process.⁵ The most accepted and said to be the most probable theory is the one stated by Bruggemann that describes it to be embryonic remnants of the lower anterior part of the nasolacrimal duct.^{3,6} However, some cysts may develop as a result of chronic inflammation and surgical treatments.⁷

Differential diagnosis for such a lesion may include nasopalatine duct cyst or globulomaxillary cyst, but the extraosseous location aids to rule out their possibility. The other possibilities include soft tissue cysts, such as dermoid or epidermoid cyst, furunculosis of the base of the nose, benign tumours, soft tissue and salivary gland tumours. Malignant tumours should also be considered as a rare possibility. The location as well as the extent of involvement aids to clinch the diagnosis. Nevertheless, the final diagnosis is ideal to be judged by histopathological analysis.

Imaging can play a major role in the diagnosis of Nasolabial cyst as they can be difficult to characterize clinically. Intraoral radiographs and Orthopantomograms (OPG) are not informative in the diagnosis of Nasolabial cyst, but however, they can be used to exclude clinically similar lesions but of osseous origin. USG (Ultrasonography) can be used as a screening modality where it demonstrates a well-defined avascular cystic lesion. Computed tomography is the most commonly used modality to diagnose a swelling in the maxillary region as it provides valuable information of the underlying bone. Though Nasolabial cysts do not cause any bone changes, larger cysts may cause remodelling of the underlying bone. MRI is very useful in characterization of the lesion based on the signal intensities on different sequences. Most often, it produces a uniformly low signal on T1 weighted sequence and uniformly high signal intensity on T2 weighted sequence, but there may be variations based on the cyst contents. MRI is very useful to differentiate the lesion from other clinically similar lesions.⁸

Complications include nasal obstruction and spontaneous rupture with fistula formation. Recurrence following surgical removal is extremely uncommon. Malignant transformation is rare.

DISCUSSION OF MANAGEMENT

Treatments options include excision of the cyst in-toto (intraoral or endoscopic excision) or other methods like cauterization, aspiration, cryotherapy and incision and drainage.⁹ Surgical excision with sub labial approach is by far considered the treatment of choice for nasolabial cysts. The cyst is usually adherent to the nasal floor mucosa and hence there is a risk of intraoperative rupture, thereby necessitating the removal of a part of the nasal mucosa along with the cyst.¹⁰ Transnasal marsupialization of the nasolabial cyst was described by Su et al.¹¹ Both the methods are proven to be equally effective. Complications include swelling, facial or gingival numbness and oroantral fistula. Other treatment options include cauterization, aspiration, cryotherapy and incision and drainage.

FINAL DIAGNOSIS

Nasolabial cyst.

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