

## NASAL DERMOID CYST: A CASE REPORT

## Otorhinolaryngology

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## ABSTRACT

Congenital midline lesions of nose include nasal dermoids, encephaloceles and gliomas. The nasal dermoid is the least rare of these, and is an uncommon midline developmental anomaly. Unlike other craniofacial dermoids which can present as a cyst, a sinus or a fistula (Setiyawan, 2013). In this patient it was a cystic nasal swelling obscuring vision without any problem in visual acuity. He had this lesion from childhood but presented to Outpatient Department in adolescent age. Diagnostic nasal endoscopy, Ultrasonography, Fine Needle Aspiration Cytology and Contrast Enhanced Computed Tomography of Nose and Paranasal sinuses were done reporting it as a nasal dermoid without any bony erosions. All routine investigations were done and patient was planned for excision under General Anaesthesia. Excision of the mass was done under General Anaesthesia and sent for Histopathology. HPE report confirmed it as a dermoid cyst.

## KEYWORDS

midline lesion, nasal dermoid, Contrast Enhanced Computed Tomography

## INTRODUCTION

Dermoid cysts contain ectodermal and mesodermal elements. They occur along the lines of embryonic closure. Mainly nasal dermoids are found in children and are rare entity in adult. It comprises of 3% of all dermoids and 12% of head and neck dermoids (Denoyelle et al., 1997).

Typically, nasal dermoids present as a midline mass anywhere from the base of the columella, along the dorsum to the glabellar region. They are non-compressible and can discharge sebaceous material.

## Case Presentation

A 18 year old male presented to ENT OPD with complain of a painless swelling over the left side of root of nose obscuring medial canthus of left eye and vision. On palpation 3×3cm, firm, non-tender, non-mobile swelling with normal local temperature was found over nose.



Fig 1- Patient's appearance

## Investigations

On Diagnostic Nasal Endoscopy no abnormality was detected. Ultrasonography revealed a well-defined heterogenous hyperechoic lesion measuring 2.7× 2.8 cm noted at the site of swelling. FNAC from the swelling suggested it as an epidermal cyst. On Contrast Enhanced Computed Tomography scan a non-enhancing swelling of 2.3 ×2.7 with fat attenuation along with soft tissue densities in left nasal region was present, causing indentation of left lateral nasal wall seen with no underlying bone destruction or remodelling.



Fig 2- Cect Of Nose And Pns (axial Section) Showing Soft Tissue Density In Left Nasal Region

## Treatment

The patient was planned for cyst excision under GA. All routine investigations including Complete Blood Count, Liver Function Tests, Kidney Function Tests, Random Blood Sugar, Chest-Xray, ECG, Triple H Test (HIV, HbsAg, HCV) were done and patient underwent pre-anaesthetic check up. Patient was cleared for surgery under GA.

Patient was taken up for surgery. Under all aseptic condition, infiltration of 1:100000 (ligno:adr) given over proposed incisional site, 2cm vertical incision was given and skin soft tissue dissected and retracted laterally. A globular firm reddish mass was removed in toto after delineating it from surrounding soft tissue and skin incision closed in layers.

The specimen was sent for Histopathological evaluation. Post op HPE report showed a dermal cyst lined by stratified squamous epithelium with attached sebaceous gland and hair follicle. Lumen contained loose keratin flakes and scattered hair shafts.



Fig 3- Intraoperative image of the cyst



Fig 4- Whole Cyst specimen after removal

## DISCUSSION

Due to rarity of presentation practitioners are not well versed with such finding and management of such cases. There is debate

over origin of these cysts.

One theory is that they originate from an embryological aberration resulting in inadequate closure of fonticulus frontalis, allowing dermal tissue to extend between the nasal bones and cartilage. They may simply present as a small punctum or isolated mass at birth or soon after (Rahbar et al., 2003).

Erosion through nasal bones and periorbital and intracranial spread are unusual complications. It can be included in the differential diagnosis of glioma, encephalocoele and nasal polyposis.

Hartley et al suggested a staging system depending on deep extension of lesion: superficial, intraosseous, intracranial extradural, Intracranial intradural (Hartley et al., 2015). Diagnosis is purely based on site of origin and imaging, supported by fine needle aspiration study. Treatment of choice is excision. Most of the times external rhinoplasty is performed for feasibility of cyst but if intracranial extension present, involvement of neurosurgical team is definitely required.

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