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Chondroma of nasal alar cartilage : A rare entity

Sanjana V. Nemade Haris Qadri Mateen Sayyed Chetana S. Naik

Smt. Kashibai Navale Medical college and General Hospital, Pune

ABSTRACT

Chondroma is a benign tumor of cartilaginous origin. Nasal chondromas are rare and almost always arise from the nasal septum. We report a case of chondroma of the nasal alar cartilage which is an extremely rare site for this benign tumor. CT scan showed the minimally enhancing lesion from the lateral nasal wall confined to the right nasal cavity. Excision of the mass was done endoscopically.

Introduction:

A chondroma is a benign cartilaginous neoplasm which makes up for second largest bone neoplasms. Cartilaginous tumors of head and neck are rare. The sites of predilection

in the head and neck region include ethmoid sinus (50%), maxilla (18%), nasal septum (17%), hard palate and nasopharynx including sphenoid sinus (6% each), and alar cartilage (3%).[1] Nasal Chondromas are very rare. They present with nasal obstruction, bleeding and headache. Treatment of choice is surgical excision. Histopathological examination of the specimen is necessary for diagnosis. [2,3] Considering the rarity of the disease in nasal alar cartilage, we report a solitary chondroma of the nasal ala in an adult female, which was excised endoscopically.

Case Report:

A 16 year old female presented with progressive right sided nasal obstruction over a period of one year with intermittent frontal headache. There was no history of nasal discharge or nasal bleeding. Anterior Rhinoscopy showed a pale mass obliterating the right nasal cavity so as to obscure the view of inferior and middle turbinates. The mass was firm in consistency and did not bleed on touch. There was no cervical lymphadenopathy. Computerised Tomography (CT) with contrast scan of nasal cavity and paranasal sinuses revealed a minimally enhancing homogenous soft tissue mass in the right nasal cavity, arising from the nasal septum, filling the anterior part of nasal cavity (Fig 1 & Fig. 2).No intratumor calcification, local tissue destruction or cervical lymphadenopathy was seen. Endoscopic excision of nasal mass was done under general anesthesia (Fig.3). Anterior nasal pack was kept in the left nasal cavity, which was removed after 24 hours. Postoperative period was uneventful. On gross examination, the mass was pale pink in colour and firm in consistency (Fig.4). Histopathological feature was suggestive of chondroma. The patient is under regular follow up and is asymptomatic for last 6 months, with no evidence of recurrence.

Discussion:

Cartilagenous tumours of external nasal pyramid are extremely rare. In a review of literature (Kilbey et al. 1977) found 50% to originate from ethmoid and 17 % from nasal septum and that too almost always from posterior nasal septum.[4] The chondroma arising from nasal alar cartilage is extremely rare.5Approximately 60% of tumors occur in patients less than 50 years old. In the facial skeleton, chondroma generally seen in adolescence and early adulthood.

There is no gender predilection. [5,6] The most accepted theory of origin of nasal chondroma is “cell rest theory”which explains the chondrogenesis from paranasal sinuses, turbinates, hard palate or posterior part of septum. [2,3,6] Kilby et al has strongly condemned the role of accidental trauma in etiopathogenesis as chondroma invariably occurs deep in the nasal cavity.[7]

The nasal chondroma is usually seen as a slow growing, firm to hard mass but may even present with severe epistaxis (Takimoto et. Al 1987) or may even be mistaken for a nasal polyp (Butugal et. al 1997). Macroscopically, benign chondromas are smooth, firm, and lobulated tumors with a gritty "ripe pear feel." On microscopy, cartilage cells are consistently small and contain pale, vacuolated cytoplasm and small, round, dark-stained nuclei. Some fields may show binucleate cartilage cells, indicating a process of amitotic division, but most are monocellular and mononucleate. Making a histologic distinction between a benign chondroma and a malignant chondrosarcoma may be difficult. Although the final diagnosis is established by the histopathology report, a clinical differentiation between a benign and malignant lesion must be made so that the surgeon can plan the management of the lesion. Some clinical features should raise a suspicion of malignancy, including older age at presentation, a rapid extension of growth, an invasion of surrounding structures, and a site of origin in the facial skeleton.4,8 In our case, the features are consistent with nasal chondroma.

The differential diagnosis of nasal cavity mass lesions include both inflammatory and neoplastic conditions. Nasal polyps, fungal infections, rhinosporidiosis, tuberculosis, Wegener's granulomatosis and lethal midline granuloma present as nasal cavity soft-tissue mass lesions with or without bone destruction. [4,5] Most authors advocate surgical excision as the mainstay of treatment for nasal chondromas. For a large tumor arising from the septum lateral rhinotomy approach is preferred. For small lesions limited to the nasal cavity, endoscopic approach provides a safe and effective approach without complications.[2,4] In general, cartilaginous tumors are radioresistant. Radiotherapy is of little value for histopathologically benign tumors, but it may be offered for the treatment of primary and recurrent malignant cartilaginous tumors. Long-term follow-up of a benign chondroma is necessary because of the possibility that sarcomatous malignant transformation will occur. The prognosis is good and recurrence is uncommon with appropriate treatment.[4,5,6] In our case, complete surgical excision endoscopically gave excellent results. The patient is on regular follow up and with no recurrence.

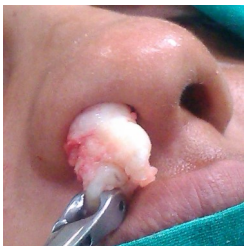

Fig 1

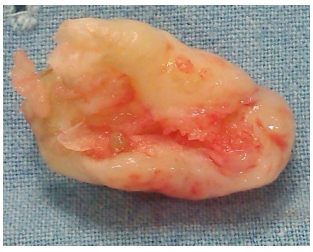

Fig 2

Fig 1: Nasal mass seen being removed

Fig 2: Chondroma specimen

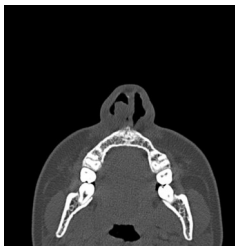

Fig 3

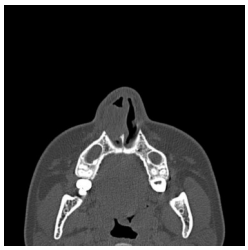

Fig 4

Fig 3 and Fig 4 showing CT nose axial cut showing the mass

Conclusion:

Though chondroma of the external nasal pyramid is extremely rare, this entity should be kept in mind as differential diagnosis of nasal mass .Clinical and histopathological differentiation between benign and malignant tumor is necessary. As this tumor has propensity for sarcomatous transformation as well as recurrence; complete excision and close follow up is necessary. Chondroma of the nasal alar cartilage has the advantage of having lesser complex anatomy anteriorly where the potential for involving vital structures is less and the tumor can be easily accessed and excised completely.

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