CASE REPORT

Chondroma of the Nasal Septum: A Rare Case Report

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Abstract

Nasal chondroma is a rare clinical condition. Imaging and histopathological examination are combined to make the diagnosis of a nasal chondroma. Surgical excision is the treatment of chondroma. While during the course of treatment, it should be kept in mind that the condition can reoccur and occasionally transform into sarcomatous changes. Therefore, close long-term follow-up is crucial for this tumor. We describe a rare case of chondroma emerging from the nasal septum in a 60-year-old male in this paper due to the unusual occurrence of the disease.

Keywords: Case report, Chondroma, Nasal, Sarcomatous, Septum, Tumor.

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Introduction

A chondroma is a benign tumor that is uncommon in the head and neck area and is made up of mature hyaline cartilage. In the maxillofacial region, a nasal chondroma is a very uncommon lesion and a rare clinical condition. Ethmoids account for 50%, while the nasal septum accounts for only 17% of chondroma cases in the nose and paranasal sinuses. A nasal chondroma grows slowly and can cause nasal obstruction, facial aesthetic issues, etc.[1] A nasal chondroma is diagnosed using imaging as well as histopathological examination. Surgery excision is the treatment of chondroma, and insufficient removal increases the likelihood of recurrence. We describe a rare case of chondroma developing from the nasal septum in this paper due to the disease's unusual occurrence in the septum.

Case Description

A 60-year-old male presented with nasal swelling and obstruction on the left side which was progressive in nature for the last two years. There was no history of nasal bleeding, discharge, or trauma. Anterior rhinoscopy revealed a mass involving the anterior part of nasal septum mainly toward left side, consistency was firm with a smooth surface (Fig. 1). No other lesion was present in the nasal cavity. A homogenous soft tissue mass of size approximately 1.5 × 1 cm arising from the anterior part of the septum mainly toward the left nasal cavity was revealed on computed tomography (CT) scan of the nasal cavity and paranasal sinuses (Fig. 2).

The nasal mass was excised under local anesthesia. For 24 hours, an anterior nasal pack was placed in the left nasal cavity with the uneventful intraoperative and postoperative periods. The specimen's histopathology revealed closely packed lobules of chondroid tissue separated by fibromyxoid stroma. The chondroid lobule reveals mononuclear chondrocytes having uniform nuclei and eosinophilic vacuolated cytoplasm. Foci of calcification and myxoid changes were seen. No mitotic activity, pleomorphism, hypercellularity, prominent nucleoli, or areas of necrosis were seen (Fig. 3). The patient is being monitored on a regular basis and has been asymptomatic for the past 6 months, with no signs of recurrence on follow-up.

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Patient consent statement: The author(s) have obtained written informed consent from the patient for publication of the case report details and related images.

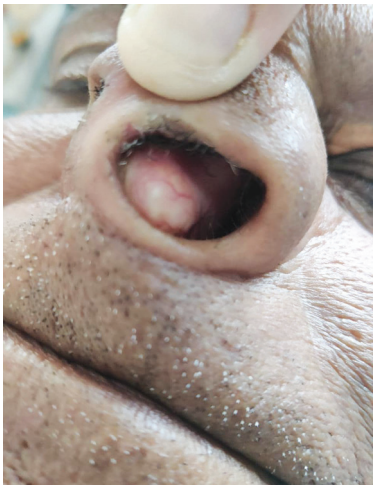

Fig. 1: Showing the mass involving the anterior part of nasal septum mainly left side

Discussion

Chondromas are benign neoplasms and only 10% are seen in the head and neck area. Chondroma can affect the cartilage of the

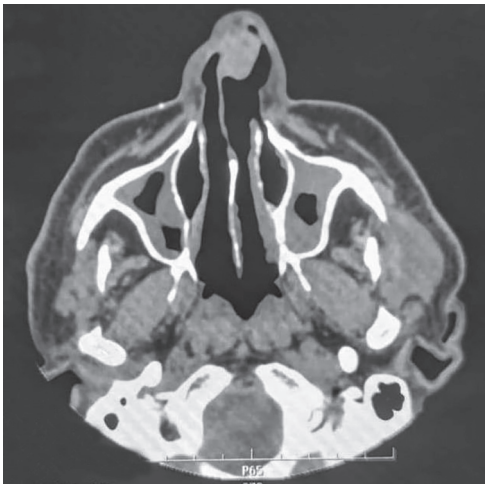

Fig. 2: CT scan of nasal cavity and paranasal sinuses showing a homogenous soft tissue mass of size approximately 1.5 × 1 cm arising from the nasal septum

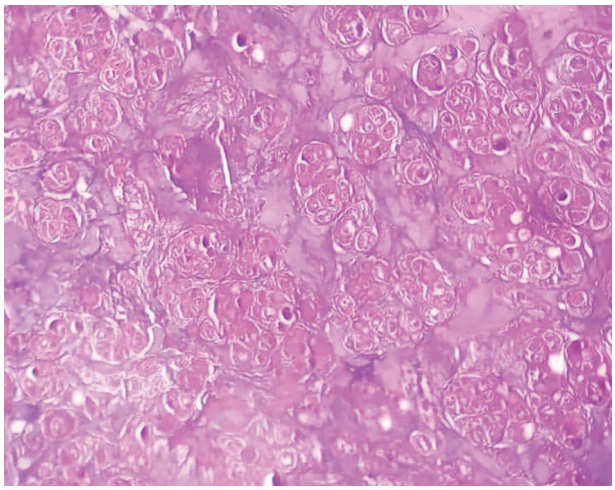

Fig. 3: Histopathology examination showing closely packed lobules of chondroid tissue separated by fibromyxoid stroma. The chondroid lobule revealing mononuclear chondrocytes having uniform nuclei and eosinophilic vacuolated cytoplasm along with foci of calcification and myxoid changes

nose, paranasal sinuses, eustachian tube, nasopharynx, cervical vertebra, tongue, gingiva, soft palate, and buccal mucosa, as well as the larynx.[2,3] The nasal septum, nasal bone, and paranasal sinuses are possible sources of chondromas in the nose. Chondroma most commonly affects the ethmoid sinus (50%), maxilla (18%), nasal septum (17%), hard palate, sphenoid sinus (6%), nasopharynx (6%), and alar cartilage (3%).[4,5]

There are several hypotheses about how chondromas develop. According to the "cell rest" theory, chondromas are thought to develop from embryonic cartilage that wasn't resorbed during endochondral ossification. The pathogenesis is attributed by the other theory, the traumatic theory, to trauma in the past and the process of healing. Cartilaginous tumors such as chondroma can arise from the nose and larynx, because of their inherent cartilaginous nature. Chondroma can develop in the sphenoid and nasal bones, which ossify in cartilage. These bones may have cartilaginous rests after ossification. The origin of these tumors at various sites has been linked to the multidirectional differentiation of mesenchymal cells.[5–7]

Nasal chondromas are quite uncommon. It is a slow-growing, painless, benign tumor that typically goes unnoticed for a long time. It is made up of mature hyaline cartilage. Nasal obstruction, nasal bleeding, and headache are the clinical manifestations of nasal chondroma. If chondromas are found close to the skull base area, they may infiltrate neighboring structures such as the optic nerve, internal carotid artery, and other cranial nerves and cause symptoms specific to the structure affected.[8]

The effect of pregnancy on chondroma enlargement has been documented. The mechanism could be related to the physiological changes that occur during pregnancy. Blood vessel engorgement can lead to tumor growth. Hormonal fluctuations, such as estrogen and progesterone, may also play a role in tumor development.[6]

Nasal septal chondroma should be considered when making a diagnosis of nasal septal masses. Chondrosarcoma, chondroid chordomas, and enchondromas are other histological differential diagnoses. One of the most difficult challenges is distinguishing low-grade chondrosarcomas from enchondromas in radiology and histology, which frequently leads to initial misdiagnosis.[9]

The prevalence of malignant tumors is double that of benign cartilaginous tumors. In order to distinguish between a chondroma and chondrosarcoma, significant considerations must be made. Necrosis, mitoses, and pleomorphism should be excluded as malignant characteristics. Anisocytosis is one feature that should be specifically looked for since it may be a marker of low-grade chondrosarcoma in transition from a chondroma.[6,7]

A combination of clinical, radiographic, and histological evidence is used to make the diagnosis of chondroma. To assess a tumor like a chondroma's bony and soft tissue features, imaging is a crucial tool. The extent of the chondroma can be determined with a contrast-enhanced CT scan of the nose and paranasal sinuses. Chondromas appear well-defined and homogenous but are not radio-opaque.[10]

Surgical excision is the treatment of the choice. Lateral rhinotomy is preferred in case of large chondroma of the nose. The endoscopic approach is a non-complicated and safe method for small lesions.[11] With the appropriate treatment, the prognosis for chondromas in the nose is favorable, and recurrence is uncommon.[12] In this case, complete surgical excision produced a good results. The patient is under regular follow-up without any recurrence.

Conclusion

Nasal septal chondroma is a rare clinical condition. Particularly if there has been a history of nasal trauma, it should be considered when diagnosing a nasal septum lesion. A histopathological examination is necessary to confirm the diagnosis. The preferred treatment is complete excision, using various methods depending on which part of the nasal septum is involved. While during the course of treatment, it should be kept in mind that the condition can reoccur and occasionally transform into sarcomatous changes. Therefore, close long-term follow-up is crucial for this tumor.

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