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Case Report

Anterior Nasal Chondroma: A Common Chondroma in an Uncommon Location

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Abstract

Background: Of the rarely reported chondromas of the nasal septum, most arise from the posterior septum. This article presents a rare case of a chondroma arising from the columellar space, anterior inferior to the septum.

Case Report: A 62-year-old female presented with a one-year history of post-nasal drip and 3 months of nasal congestion. Physical exam revealed a firm, well-circumscribed mass in the columella of the nose. Computed tomography (CT) and histopathology was performed. Endoscopic excision of the mass was performed.

Results: Computed tomography (CT) image readings described a 2.1 x 1.5 x 3.0 cm, relatively smooth mass from the anterior-inferior nasal septum with homogenous density and no internal calcification. Histopathology revealed a benign chondroma. Post-operatively, she reported significant improvement of symptoms. No recurrence as of 9 months follow-up.

Conclusion: We present a rare case of anterior inferior nasal benign chondroma. Chondromas should remain on the differential when investigating nasal masses.

Keywords: Chondroma; Nasal Chondroma

Introduction

Chondromas are benign tumors composed of mature hyaline cartilage with well-defined borders. They are most commonly found in the long bones of the body and less frequently in the pelvis, sternum, ribs and scapula [1]. They are exceedingly rare in the head and neck region; since the first reported case by Morgan in 1842, there have been approximately 150 cases of head and neck chondromas reported in English medical literature [1]. When they do occur in the head and neck region, sites of predilection include ethmoid sinus (50%), maxilla (18%), nasal septum (17%), hard palate and nasopharynx including sphenoid sinus (6% each), and alar cartilage (3%) [2]. Of those chondromas originating from the nasal septum, most were from the posterior aspect of the septum [3]. In this article we report a rare case of chondroma arising in the columellar space anterior inferior to the septum.

Case Report

A 62 year old female patient presented to the outpatient clinic with sinonasal complaints of a one year history of post-nasal drip and 3 months of bilateral nasal congestion. Additionally, she reported difficulty breathing through the nose. The patient, otherwise, had no additional complaints. She denied sneezing, itchy and watery eyes, changes to sense of taste and smell, facial pain and pressure, and rhinorrhea. Physical exam was notable for a firm, well-circumscribed mass in the columella of the nose about the size of a gumball. Skin over the mass was under tension. While the lesion was described as uncomfortable, it was not associated with

any pain. The patient had an adequate airway but the mass was causing notable narrowing of the nasal valve area bilaterally. Nasal endoscopic exam performed in the upright position demonstrated bilateral nasal septal spurs with no other abnormal findings.

Computed tomography (CT) image readings described a 2.1 x 1.5 x 3.0 cm, relatively smooth mass arising from the anterior-inferior nasal septum with homogenous density and absence of internal calcification. The lesion was centered left of midline but caused notable narrowing of external nares bilaterally. Postcontrast, the lesion demonstrated minimal to no enhancement and the nasal septum was intact with mild rightward deviation of anterior septum and leftward deviation of posterior septum.

Endoscopic excision of the mass was performed under general anesthesia. Mid-operative examination revealed independence of the lesion from the anterior septum with the septum left intact. Gross pathology described a tan to pink hemorrhagic papillary-polypoid mass measuring 2.0 x 1.7 x 1.5 cm and a white, firm fragment of soft tissue with a friable outer surface measuring 1.5 x 1.3 x 1.3 cm. Histopathological consideration of the sample was compatible with a benign chondroma composed of well-differentiated chondrocytes. Margins were clear. Post-operatively, the patient reported significant improvement of nasal congestion and post-nasal drip with no postoperative complaints. No recurrence occurred as of a 9 month postoperative follow up.

Discussion

Though cartilaginous tumors of the head and neck are rare, peak incidence of nasal chondromas is between 20 and 30 years, though cases have been seen in patients over 60 [4]. Symptoms depend on location, bulk, and growth rate, though most nasal chondromas are characterized by nasal obstruction and slow growth [5]. These lesions are rarely painful but have been observed to induce pain via mass effects and deformities of neighboring tissues. Due to their large size at presentation, it is often difficult to determine the exact origin of head and neck chondromas [6].

As previously mentioned, cartilaginous tumors of the head and neck region are most commonly seen at the ethmoid sinus (50%), the maxilla (18%), nasal septum (17%), hard palate (6%), nasopharynx (including the sphenoid sinus) (6%) and the alar cartilage (3%) [2]. In contrast to this standard trend, we identified 3 cases noting a similar anterior origin as this case. All 3 of these unique cases described a chondroma over the alar cartilage whereas this case precluded any definitive assumption of cell source [7-9]. While several theories exist regarding chondroma cell origins, the most widely accepted is the "cell rest" or "embryonic remnants" theory which describes embryonic cartilage cells in senescence that were not resorbed during endochondral ossification and can later divide to develop chondromas [10]. This theory would explain the chondrogenesis from surrounding cartilage.

Imaging studies can assist in assessing the extent of tumour growth and assessing if chondromas are well circumscribed and homogenous on CT. Biopsy remains the only method of certain diagnosis [11]. Histological distinction between benign chondromas and malignant chondrosarcomas can be rather difficult. Histologically, chondromas display duplication of normal cartilage despite increased cellularity, but chondrosarcomas exhibit pronounced irregularity in the number and size of cells as well as degree of hyperchromatism [12]. Both appear as a lobulated nodule with a fibrous capsule.

Surgical excision is the accepted treatment method for cartilaginous tumours in this region.[10] Chemotherapy and radiotherapy are generally ineffective for benign tumors [1]. As chondromas can exhibit malignant transformation follow up is necessary. We suggest follow up every three months for the first year, every six months during the second year, and once a year from there on. Long-term prognosis of treated nasal chondromas is good.

Conclusion

We present a rare case of anterior inferior nasal benign chondroma. Chondromas should remain on the differential when investigating nasal masses.

Financial Disclosures

None.

Conflicts of Interest

None.

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