Case Report

Chondroid Choristoma of Tonsil: A Rarity Unveiled

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ABSTRACT

Introduction: A choristoma is a mass of histologically normal tissue in an abnormal location. The presence of choristoma in the tonsils is extremely rare. It follows a benign course and could be the cause of recurrent tonsillitis. **Case History:** We report a case of chondroid choristoma in a 32-year-old male who presented with recurrent tonsillitis. The histopathological examination showed the unexpected presence of mature hyaline cartilage in both the tonsils. **Discussion:** Choristoma is defined histologically as an island of normal tissue that is presented in an aberrant location. It was first described by Berry in 1890 and occurs between 10 and 80 years of age. Although the natural history of this lesion is not clear, there are various hypotheses proposed for the pathogenesis of choristoma. They may develop from fetal cartilaginous remnants or pluripotential mesenchymal cells activated by trauma, irritation, or inflammation or they are a developmental anomaly linked to the second pharyngeal arch. **Conclusion:** Chondroid choristoma of the tonsils is a rare hidden entity. A high index of suspicion is required while evaluating the patient with chronic tonsillitis.

Keywords: Cartilage, choristoma, tonsil

INTRODUCTION

A choristoma is a condition where histologically normal cells are found growing in an unusual location within the body. The term "Choristoma" was initially coined by Krolls *et al*.[1] The types of tissues found in choristoma include salivary gland, cartilage, bone, thyroid, sebaceous gland, glial, gastric, or respiratory mucosa.[2] These growths can appear in different parts of the body. Osseous and cartilaginous choristomas are commonly found in the mouth, particularly at the back of the tongue. However, osteocartilaginous and bone choristomas are extremely rare, with only a limited number of cases reported in the medical literature.[2,3] Choristomas have occasionally been found in the palatine tonsil.[3,4] Berry first documented cartilaginous choristoma in 1890. These growths are often incidentally discovered during examinations for other conditions or routine tonsillectomies. They typically appear as painless, firm nodules in young adults, especially females, and often present as recurrent tonsillitis with enlarged tonsils.[2,5] Theories about the origin of these growths suggest they may develop from fetal cartilaginous remnants or pluripotential mesenchymal cells activated by trauma, irritation, or inflammation. Another possibility is that they are a developmental anomaly linked to the second pharyngeal arch. Diagnosis typically involves biopsy or excision, and the usual treatment is surgical removal. The recurrence rate after excision is very low.[6,7]

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CASE REPORT

A 32-year-old male presented to Ear Nose Throat (ENT) out patient department (QPD) with the chief complaints of recurrent episodes of sore throat, fever, difficulty in swallowing, halitosis, and burning sensations in the throat for 2 years. On local examination, both the tonsils were enlarged and inflamed, covered with white flakes of purulent exudates. On palpation, they were firm and gritty. The rest of the head and neck examination was unremarkable. A clinical diagnosis of chronic tonsillitis was made. Bilateral tonsillectomy was performed and the specimen was received in the pathology department for histopathological evaluation. Grossly, excised right and left tonsils were globular, gray-brown, firm, and gritty in consistency with the sizes 2.5 × 1.5 × 1.0 cm and 2.0 × 1.0 × 1.0 cm, respectively. The cut surface was gray-brown and smooth with a glistening area measuring 0.5cm. On microscopic examination, both the tonsils were showing features of chronic tonsillitis [Figure 1]. Furthermore, seen were islands of mature hyaline cartilage surrounded by lymphoid follicles along with the areas of fibrosis [Figure 2]. A diagnosis of chondroid choristoma of the tonsils was made. The patient did not report afterward and was lost to follow-up.

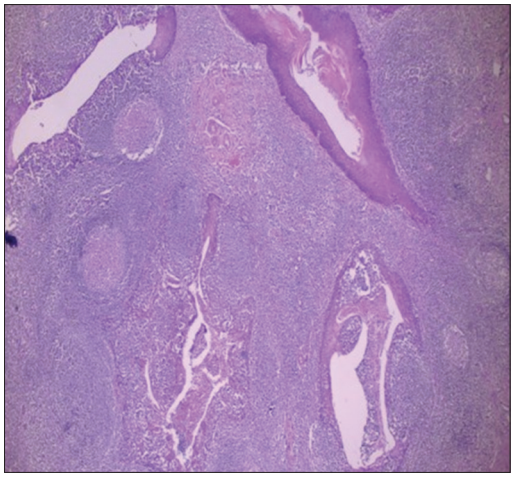

Figure 1: Photomicrograph shows histopathological features of chronic tonsillitis (H&E 4× magnification)

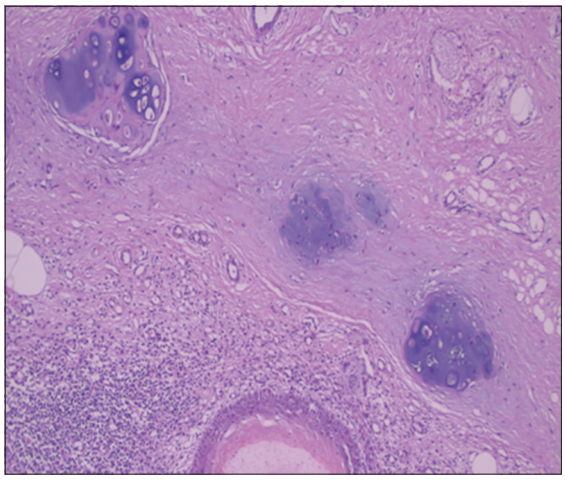

Figure 2: Photomicrograph shows islands of mature hyaline cartilage in the tonsil (H&E 10× magnification)

DISCUSSION

A choristoma is a tumor-like mass that results from ectopic normal tissue due to an embryological developmental defect. It is considered a developmental anomaly of the second pharyngeal arch.[1,2,3,6] The term choristoma was first introduced by Krolls *et al*.[1] The age group ranges widely from 10 to 80 years with a mean age of 47 years. The sites of involvement are the pharynx, hypopharynx, oral cavity, tonsils, palate, and middle ear.[5] The types of tissues found in choristoma include salivary gland, cartilage, bone, thyroid, sebaceous gland, glial, gastric, or respiratory mucosa.[2] Cartilaginous choristoma was first described by Berry in 1890.[5] These lesions are more commonly found in the tongue within the oral cavity, followed by the buccal mucosa and soft palate.[6] Interestingly, while chondroid choristomas of the tongue are more prevalent in females, those located in the palatine tonsil do not show any gender predilection.[4] Choristoma typically presents as a painless, firm nodule in young adults, especially females. Its presence in the tonsil is extremely rare, with fewer than 10 reported cases to date. These lesions usually manifest as chronic tonsillitis accompanied by tonsillar enlargement. In a study by Erkilic *et al*. involving routine tonsillectomy specimens, a 3% incidence of cartilage in tonsillar tissue was observed.[4,5] Considering these findings, choristomas should be considered when evaluating patients with chronic tonsillitis. Larger choristomas can be clinically mistaken for true neoplasms.[6]

Here, we are reporting a case of chronic tonsillitis with a chondroid choristoma.

The natural history of this lesion is not clear, there are various hypotheses/theories proposed for the pathogenesis of choristoma such as cartilaginous development from heterotopic fetal cartilaginous remnants and development from pluripotential mesenchymal cells which get stimulated to grow by trauma, irritation, or inflammation, or it may be a

developmental anomaly in the second pharyngeal arch and could be one of the causes of recurrent tonsillitis.[5-8]

Chondroid choristoma should be differentiated from cartilaginous metaplasia. Histologically, cartilaginous metaplasia is marked by diffuse calcium deposits and scattered cartilaginous cells at various stages of maturation, either singly or in clusters.[3,9]

In our case, while a small area of calcium deposition was noted, the majority of the tonsillar tissue was occupied by mature hyaline cartilage. Since mature hyaline cartilage is not a normal constituent of the tonsil, the lesion was identified as a choristoma. Hence the diagnosis of chondroid choristoma was offered.

The recommended treatment for this lesion is simple excision along with the surrounding soft tissue. Although there have been no documented recurrences of head and neck choristomas, some cases in the oral cavity have been reported to recur. Therefore, it is important to remove the perichondrium, as it may have the potential to generate new cartilage. However, in most instances, the lesion is expected to follow a benign course, similar to normal cartilage elsewhere in the body.[5-10]

CONCLUSION

Chondroid choristoma of the palatine tonsil is an uncommon and academically intriguing condition. Although the natural history of this lesion is not well understood, it generally follows a benign course and may contribute to recurrent tonsillitis. Therefore, it is essential to maintain a high level of suspicion for this lesion when assessing patients with recurrent tonsillitis.

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