CASE REPORT

Cartilaginous choristoma of tonsil: A hidden clinical entity

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ABSTRACT

Choristomas are aggregates of microscopically normal cells or tissues in aberrant locations. Cartilaginous choristomas of the oral cavity are rare and occur preferentially on the tongue and less often in sites such as the soft palate and gingiva. We report a case of cartilaginous choristoma in a 24-year-old male presenting with persistent tonsillitis. Histopathological examination demonstrated the presence of mature island of hyaline cartilage surrounded by lymphoid hyperplasias.

Key words: Choristoma, cartilaginous, tonsil

INTRODUCTION

Choristoma is histologically an island of normal tissue that occurs in an abnormal location.[1] Choristomas in the head and neck region have been reported in the pharynx, hypopharynx, oral cavity, and middle ear.[1,2] Several different tissue types can occur in the oral cavity as choristomas. They can be cartilage, bone, glial tissue, salivary gland, and thyroid tissue.[2-4] The most frequently observed choristoma in the oral cavity are osseous and these are most frequently seen in the tongue.[5] Cartilaginous choristoma of oral cavity is also frequently seen in the tongue, followed by buccal mucosa and soft palate.[6] However, only a few cases of cartilaginous choristomas of tonsil have been reported so far.

CASE REPORT

A 24-year-old male presented to the Ear, Nose, and Throat (ENT) Department with history of recurrent sore throat, pain, fever, and painful swelling. On examination, tonsils were persistently enlarged and white flakes were present on the tonsil. A clinical diagnosis of tonsillar keratosis was made. Tonsillectomy was performed and the specimen was sent for histopathological examination. Both the specimens from the right and left tonsils measured approximately 3 cm × 2 cm × 1.5 cm. Cut-section was grey in color and gritty to cut. Microscopic examination revealed lining of stratified squamous epithelium which at places had invaginated into the deeper tissues forming blunt ended crypts [Figure 1]. The subepithelial region contained numerous lymphoid follicles showing follicular hyperplasia with adjacent fibrocollagenous tissue. Numerous islands of mature cartilage were seen embedded in the fibrocollagenous tissue [Figure 2]. A diagnosis of cartilaginous choristoma was given.

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DISCUSSION

The neck is developmentally complex with frequent embryologic anomalies. Cartilaginous choristoma of head and neck with predilection to the oral cavity is also thought to be a developmental anomaly. Cartilaginous choristoma was first described by Berry in 1890.[7] The age of diagnosis varies greatly from 10 to 80 years.

Cartilaginous choristoma is characteristically seen as a painless, firm nodule in young adults, especially in females. Various sites can be affected, but it is most frequently being reported on the tongue.[8] Presence of choristoma in the tonsil is extremely rare and less than 10 cases have been reported so far. They usually present as chronic tonsillitis with tonsillar enlargement. Erkilic *et al*., in their study of routine tonsillectomy specimens found a 3% incidence of cartilage in the tonsillar tissue.[9] Few authors highlighted that routine histopathological examination of tonsillar tissue in the absence of worrisome clinical symptomatology is unnecessary. On the contrary, we feel that neglecting histopathological examination just by clinical findings would hamper the understanding of various hidden entities like the choristoma.

Cartilaginous choristoma should be distinguished from cartilaginous metaplasia, which usually occurs in the soft tissue beneath ill-fitting dentures.[10] The latter is characterized histologically by the diffuse deposits of calcium and cartilaginous cells arranged in various stages of maturation in single or clustered cartilaginous foci.

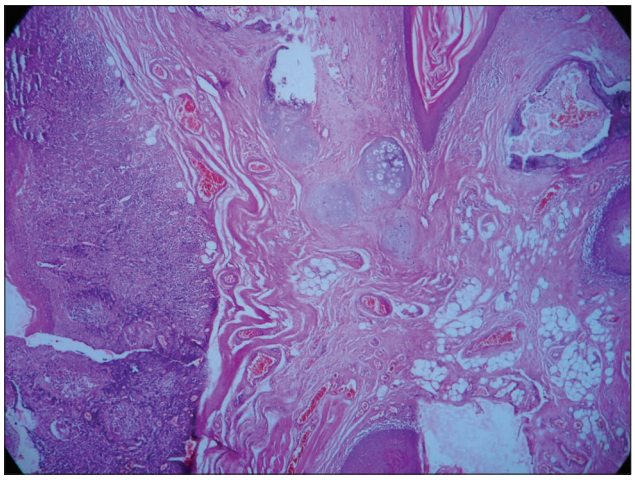

Figure 1: Histopathology showing stratified squamous epithelium invaginating into tonsillar tissue with adjacent islands of cartilaginous tissue (H&E stain, x100)

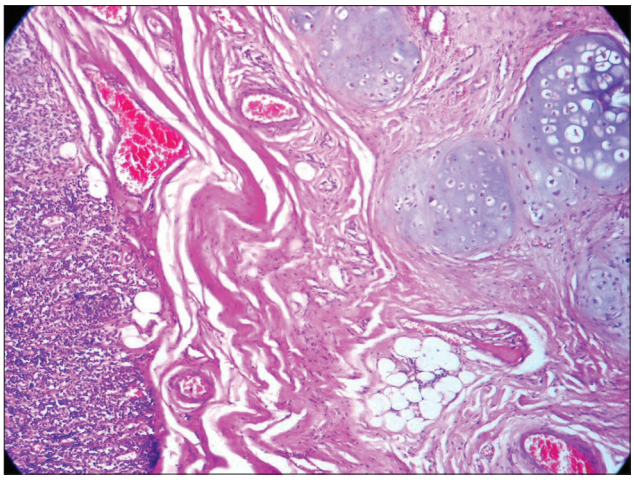

Figure 2: Histopathology showing islands of cartilage adjacent to follicular hyperplasia in tonsil (H&E stain, x100)

Choristoma of the tonsil appears to be a developmental anomaly associated with the second pharyngeal arch and could be one of the causes of recurrent tonsillitis.[11] The endodermal wall of the developing foregut is separated from the surface ectoderm by a layer of mesoderm, which forms the pharyngeal arches, and the endoderm extends outwards in the form of a pouch. The palatine tonsil develops in relation to the lateral part of the second pharyngeal pouch. Any anomaly during this development will lead to formation of aberrant mesenchymal tissue within the tonsil.[8]

Few others opine that extraskeletal proliferation of cartilage in oral cavity and maxillofacial soft tissue probably reflects the multipotential nature of primitive mesenchymal cells, which may be stimulated to grow by trauma, irritation, or inflammation.[8,10] However, de novo development of this lesion in nasopharynx seems highly improbable. Therefore the natural history of this lesion is undefined and will remain so.

Although recurrence has not been documented in the head and neck, some extraoral cases have been reported to be recurrent, so all the perichondrium should be removed, because it may have the potential to develop new cartilage.[12] Overall, cartilaginous choristoma in tonsil remains a rare entity and comprises a very small minority of all nasopharyngeal masses. However, it is expected to follow a benign course as normal cartilage found elsewhere in the body.

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