Tonsillolith in a Child: A Case Report and Review of Literature

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ABSTRACT

Tonsilloliths are lumps of tiny stones (calculus) located at fleshy crypts at the back of the tonsils. Although they are not uncommon in grown up individuals, tonsilloliths, however, are rare in children. We report a case of unilateral tonsillolith in an 11-year-old girl who reported with past history of an external body impaction in the right tonsil.

Keywords: Child, Foreign body, Tonsillolith.

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INTRODUCTION

Tonsilloliths commonly known as tonsils stones is a lump of calcified material in the fleshy pad at the back of the throat. Tonsillar concretions are not uncommon; however, clinically significant tonsilloliths are infrequent. The most commonly affected individuals are 20–68 years, with no sex predilection and are infrequent in younger age groups. The tonsils stones may usually does not present with any symptoms or may present with throat irritation, dysphagia, and otalgia.^{1–4}

The authors here present a case of tonsillolith in an 11-year-old female child who reported with chief complaints of foreign body sensation in her right tonsil.

CASE DESCRIPTION

A young female (11 years) reported to Department of Pedodontics and Preventive Dentistry, PGIDS, Rohtak, with a history of a whitish foreign body impaction in her right tonsil. It was associated with mild pain and throat irritation. There was no history of recurrent sore throats, fever, neck swelling, or dysphagia. The expert opinion was taken by the Department of Otolaryngology, PGIMS. Initial examination was found to be uneventful, and the otolaryngological evaluation showed a whitish mass of about 3 mm × 3 mm projecting from the right tonsil near the upper pole (Fig. 1). There was no surrounding inflammation or discharge. Examination of the neck revealed no significant lymphadenopathy. Rest of the ENT examination was normal.

A diagnosis of tonsillolith was made. By using a tongue depressor, the tonsillolith was easily removed by applying a gentle pressure over the anterior pillar under local anesthesia. The removed tonsillolith was whitish hard stony mass measuring 5 mm × 4 mm (Fig. 2). The postoperative events were satisfactory. The patient was sent home with an advice to maintain a good oral hygiene.

DISCUSSION

These are more common in adults and occurrence in children is rare.^{1,2}

The reason for the occurrence of the tonsillolith is not clear. However, the tonsillolith was suggested to coevolve as a

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result of deposition of the foreign material in faucial pillars with superimposed bacterial and fungal growth. Microscopically,

Fig. 1: Tonsillolith in the right tonsil

Fig. 2: The removed tonsillolith was whitish hard stony mass measuring 5 mm x 4 mm

microbial colonies are seen. The author stated that microorganisms present in the caseous section in faucial crypts were primarily responsible for deposition offering hard calculus concretions, which can gradually grow to large sizes.^{1,4,5} The recurrent sore throat is thought to be a predisposing factor as these can lead to fibrosis at the openings of the faucial crypts and add to the creation of redundancies pouches; calcifications results due to the aggregations of inorganic salts and subsequent augmentation of the formed congregation occur gradually.⁶

Stoodley et al. stated that structurally tonsilloliths were analog to dental biofilms, having corncob structures, filament, and cocci. The authors stated that the center of the tonsillolith has one-tenth oxygen concentration as compared to the superior aqueous fluent. Moreover, the inclusion of sucrose results in acid formation within the tonsillar stones and these conditions may allow production of anaerobic/acidophilic bacteria.⁷

The tonsillolith is made primarily of calcium salts, in particular calcium hydroxyapatite and calcium carbonate crystal. They acquire their phosphate and carbonate salts from saliva.^{1,2,5,6}

Tonsilloliths may be isolated or multiplex and may be one-sided or bilateral.⁸ Clinical presentation may disperse lying on the size of the tonsillolith. Tiny aggregations usually remain symptomless on one hand and on the other large stones usually symptomatic with frequent pain complications along with foreign body response, dysphagia, otalgia,odynophagia, and halitosis.⁹ The protruding tonsillolith presented similar to a foreign object¹⁰ as in the present reported case that presented with history of throat irritation and foreign object impaction in the tonsil.

The differential diagnosis of tonsilloliths consists of tonsillitis, peritonsillar abscess, foreign bodies, phleboliths, elongated styloid process, a large maxillary tuberosity, prominent hamulus of the pterygoid, mandibular ramus, ectopic tooth, granulomatous lesions, isolated ectopic bony process, or connective tissue evolved from unit rests, osteoma, and malignancy.^{1-6,8-10}

Tonsillolith can be easily diagnosed by examination of the oropharynx. The diagnosis can be validated by a panoramic radiograph, computed tomography, and magnetic resonance imaging.^{1,3-6,11} Recently, the use of ultrasonography in the diagnosis of tonsillolith has been described and may be useful for early cases with small concretions.¹²

Small symptomatic tonsillolithiasis can be effectively treated by simple manual expression with soft squeeze/compression or by scooping under local anesthesia.^{1,3,4} Pulsatile spray may be used for debridement of the faucial pockets of debris manually. The large tonsillolith requires surgical removal sometimes along with tonsillectomy.^{1,3}

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