

Bilateral Tonsillolith – An incidental finding

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Abstract

A calcified mass within the tonsil is called as Tonsillolith and it is a relatively rare entity commonly found in the tonsillar crypt. They are usually single and unilateral, but occasionally may be multiple or bilateral. This report describes a case of 54 year-old man whose radiography revealed a cluster of multiple small ill-defined radiopacities ranging from 0.2 to 0.5 cm in diameter overlapping on both the right and left ramus of the mandible. The patient was asymptomatic, but he was having mild halitosis since 6 month. As the patient was not willing for surgery, he will be monitored due to the tendency of such lesions to grow.

Introduction

Tonsillolith is dystrophic calcification in the tonsil. It is also called as ‘tonsillar calculi’, ‘tonsil concretion’ and ‘tonsillolithiasis’. It can be defined as “Calculi formed when repeated bouts of inflammation enlarge the tonsillar crypts, incomplete resolution of dead bacteria and pus serve as the nidus for dystrophic calcification^[1].”

Tonsillolith are calcified structures, most of the time it is caused by accumulation of bacterial and organic debris in the tonsillar crypt contributes to the formation of retention cysts and subsequent deposition of inorganic salts. They can be single, multiple, unilateral or bilateral^[2,3]. Patients with tonsillolithiasis are sometimes associated with pain, swelling, nonspecific halitosis, irritable cough, difficulty while swallowing and eating, ear pain and foreign body-like sensation or foul taste. It may be asymptomatic, with their lesions being obtained incidentally on panoramic radiographs also^[4,5].

Tonsilloliths contains phosphate and/or carbonate salts of calcium. These are arranged in a structure similar to that of bone crystals of hydroxyapatite $Ca_5[OH(PO_4)_3]$. The hydroxyl ion (OH⁻) in the hydroxyapatite can be replaced by fluoride, carbonate, or chloride. The hydroxyapatite crystal has a specific gravity of 3.08 and is 5 on the Mohs hardness scale^[6,7]. A protein matrix has also been expressed as part of Tonsilloliths^[8,9].

Case Report

A 54-year-old man reported to the Department of Oral Medicine and Radiology, Dr. Syamala Reddy Dental College, Hospital and Research Centre, with the chief complaint of inability to chew food on his left side of jaw since 1 month^[Fig. 1]. Patient has medical history of diabetic mellitus since 4 year and is under homeopathy medication. Clinical examination revealed open bite on his left side of jaw. Generalised periodontal pockets were noted. Missing 47 was noted.

Gradel mobility i.r.t. 41, and 42 also noted. To investigate further, a panoramic radiograph was taken which showed an incidental finding of presence of multiple bilateral radiopacities on the mid portion of right and left mandibular ramus^[Fig. 2]. These radiopacities were multiple, small and ill-defined and they were approximately around 2 mm in diameter and these bilateral radiopaque masses were not deemed to be part of the stylohyoid complex, sialoliths, calcified lymph nodes, phleboliths. No changes in the bone pattern were seen over or near the angle and ramus of the mandible other than elongated styloid process.



Fig. 1: Extraoral photograph of patient

Discussion

Normal age of patient with Tonsillolith range from 10^[10] to 77 years^[11]. (Mean 50 year, 49.7 for males and 50.5 for females) with male/ female ratio is 1:1. As far as location is concerned, the Tonsillolith was placed in tonsillar fossa in 21.2%, in tonsillar tissue in 69.70% and in the palate 9%. The size ranged from few millimeters to several centimetres and it mainly contains carbonates and phosphates of calcium. Other minerals such as magnesium, sodium, siliceous,

potassium, ammonia radical, copper, iron, manganese can also be present.

Tonsillolith can also reveal symptoms such as pain in throat, swelling in tonsillar fossa 15% and swelling submandibular region 6%, dysphagia 10%, bad taste 3%. On the other hand 9% patients are asymptomatic when calcification present on palatal and pharyngeal heaviness have been described by patients^[10]. Histologically, a tonsil consists of a mass of lymphoid tissues that contain follicles with germinal centres. The surface of the tonsil forms crypts lined by stratified squamous epithelium which is less mature than those of the oral mucous membrane. Occasional foci of ciliated epithelium are not uncommon.^[12]

The exact aetiology and pathogenesis of the Tonsillolith is not known; but, the calcifications build up within a mass of desquamated epithelium, serum, food debris and bacterial colonies. Recurrent tonsillar inflammation may produce fibrosis at the opening of the tonsillar crypts. Bacterial and epithelial debris then accumulate within these tonsillar crypts and form a retention cysts. Calcification occurs subsequent to the deposition of inorganic salts and enlargement of the concretion takes place gradually^[3].

Usually no treatment is required for small lesions. Large lesion requires local surgical excision.



Fig. 2: Arrow showing a small discrete ill-defined radiopaque masses which are the tonsillolith

References

1. Freney R. Karjodkar. Textbook of dental and maxillofacial radiology. 2nd edition; page 776
2. Neville B W, Damm D D, Allen C M et al. Oral and maxillofacial pathology. 2nd edition. Philadelphia: WB Saunders, 2002; page 798
3. M. P. Caldas et al. Tonsillolith – report of an unusual case. British dental journal volume. 2007;5:202 .
4. Balaji Babu B. et al Tonsillolith: A Panoramic Radiograph Presentation. Journal of Clinical and Diagnostic Research. 2013 Oct;7(10):2378–2379.
5. Marshall W G, Irwin N D. Tonsilloliths. Oral Surg Oral Med Oral Pathol 1981;51:113.
6. I. el-Sherif and F. M. Shembesh, “A tonsillolith seen on MRI,” Computerized Medical Imaging and Graphics, 1997;219(3):205–208.
7. M. M. Cooper, J. J. Steinberg, M. Lastra, and S. Antopol, “Tonsillar calculi. Report of a case and review of the literature,” Oral Surgery Oral Medicine and Oral Pathology, 1983;55(3):239–243.
8. B. Z. Pilch, “The nasopharynx and Waldeyer’s ring,” in Head and Neck Surgical Pathology, B. Z. Pilch, Ed., pp. 157–194, Lippincott Williams and Wilkins, Philadelphia, Pa, USA, 2001.
9. Krespi YP, Kizhner V. Laser tonsil cryptolysis: In-office 500 cases review, Am J Otolaryngol–Head and Neck Med and Surg; 2013.
10. Cerny R, Bekarek V. Tonsillolith. Acta univ palackiolomucfac med 1990;126:267-73.
11. Gapany-gapanovic B. peritonsillar abscess caused by a large tonsillolith. Ear nose throat j 1976;55:343-5.
12. M. Mesollela et al. Tonsillolith. case report and review of literature. Acta otorhinolaryngol ital. 24,302-307;2004.