

An Unusual Case of Early Stage Tonsillolith- A Case Report

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Case Report

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ABSTRACT

Tonsilloliths are the calcifications within a tonsillar crypt. They primarily involve the palatine tonsils which are caused by dystrophic calcification as a result of chronic inflammation. They can be single and unilateral, but occasionally can be multiple or bilateral. Patients with tonsilloliths can occasionally be asymptomatic. This article represents a case of unilateral and asymptomatic tonsillolith which was found during a routine clinical examination. This report describes a case of a 25-year-old female with a history of slight dysphagia with a foreign body sensation.

Keywords: Tonsillar Crypt, Dystrophic, Calcification, Dysphagia, Calcified Mass.

Introduction

Tonsilloliths are calcified structures that develop in enlarged tonsillar crypts that are packed with bacterial and organic debris. They arise as a result of dystrophic calcification in the crypts of the palatine tonsils, leading to the chronic inflammation of the tonsils.¹ Recurrent episodes of inflammation can produce fibrosis at the openings of these tonsillar crypts. They are unilateral and can be bilateral. They occur most commonly in young adults age ranging from 20-60 years and can rarely affect children. The majority are located in tonsillar tissue (69.7%), tonsillar fossa (21.2%), and palatine tonsils (9%). Tonsilloliths may range in size from a few millimeters to several centimeters.² They are composed of calcium salts and other magnesium salts and ammonium radicals. Due to the bacterial and epithelial debris accumulation within these crypts, they lead to the formation of retention cysts. Calcification occurs by the deposition of inorganic salts takes

place gradually. The tonsilloliths derive their phosphate and carbonate of lime and magnesia from saliva which is secreted by three major salivary glands and by about 400 to 500 minor salivary glands.³ Tonsillar concretions may produce symptoms such as chronic halitosis, irritable cough, dysphagia, and a foreign body-like sensation.⁴ This report represents a case of a tonsillolith of the right palatine tonsil in a patient who had a history of pharyngeal discomfort with a foreign body sensation.

Case Report: A 25-year-old female visited the department of Oral Medicine and Radiology, Seema dental college and hospital, Rishikesh, Uttarakhand with a chief complaint of difficulty in swallowing with a foreign body sensation for 1 month. Questioning indicated that the patient was not having any signs and symptoms of any systemic illness and was not on any medication. There was no known drug allergy. No swellings or discomfort had ever been present in the head or neck areas. On clinical examination, there are enlarged palatine tonsils with a submucosal mass protruding from the right palatine tonsil which is yellow in color (fig.1). It is round in shape, one in number with no tenderness on palpation. While palpating, the mass came out of the right tonsillar area which is approximately 0.3mm x0.5mm in diameter, oval in shape, soft to firm in consistency, yellow in color (fig.2). The radiographic findings were carried out by taking an RVG image, which revealed the presence of a calcified mass (fig.3). The clinical examination combined with the radiological findings led us to a diagnosis of tonsillolith. The specimen is sent for histological examination, which reveals the presence of dark purplish areas of calcification extending from but not limited to the periphery of the lesion. Numerous bacterial colonies, amorphous calcification within a matrix of organic debris is noted at the center of the lesion (fig.4). On the basis of histopathological examination features suggestive of dystrophic calcification of tonsil (early calcification stage) and all findings led to the final diagnosis of tonsillolith.



Fig.1: Clinical photograph of a patient with small, superficial tonsillolith in the right palatine tonsillar region.



Fig.2: Showing the specimen which is friable and oval in shape.

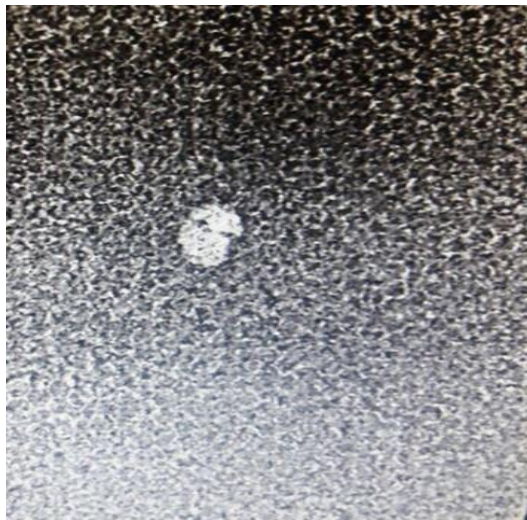


Fig.3: Radiograph showing a calcified mass.

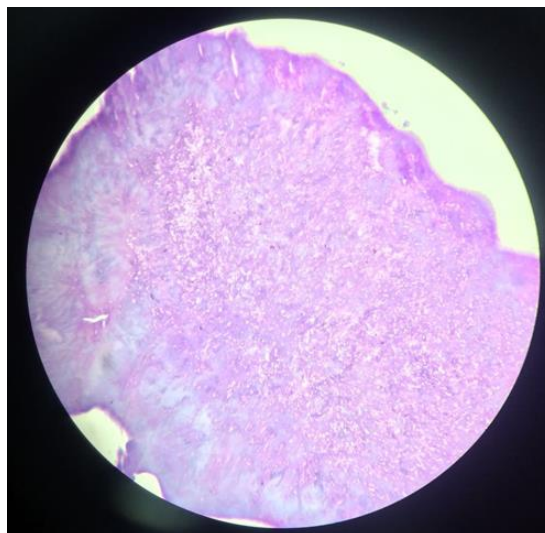


Fig.4: Histopathological image showing areas of amorphous calcification within a matrix at the center.

Discussion: Dystrophic calcification in the tonsils includes tonsillar calculi, tonsil concretions, and tonsilloliths. Tonsillar calculi are formed when repeated bouts of inflammation enlarge the tonsillar crypts.⁵ The bacterial and epithelial debris accumulates within the tonsillar crypts and leads to the formation of retention cysts.¹⁰

The exact etiopathogenesis of tonsilloliths is unknown, but most of the authors have believed that these concretions to be the result of unresolved tonsillitis. Others have suggested that the tonsilloliths developed as a result of stasis of the saliva in the efferent ducts of the accessory salivary glands secondary to mechanical obstruction arising from post-tonsillectomy scars or chronic inflammation.² While examining clinically, a superficial tonsillolith may be seen as a white or yellowish hard mass within the tonsillar region.⁶ Tonsilloliths usually manifests as a hard, round, white or yellow objects projecting from the tonsillar crypts, usually of the palatine tonsil. The consistency of tonsilloliths ranges from soft and friable to as hard as stone.³ Smaller calcifications usually produce no clinical signs or symptoms. However, pain, swelling, dysphagia, or a foreign body sensation on swallowing has been reported with the larger calcifications. These calcifications have been reported to occur in individuals ranging between 20 and 60 years old. They are found more often in older age groups but can rarely be seen in children. Panoramic radiographs are the first diagnostic tool to diagnose the radiopaque lesions in the jaws. In a panoramic image, tonsilloliths appear as single or multiple radiopacities. They are seen overlapping the midportion of the mandibular ramus in the region where the image of the dorsal surface of the tongue crosses the ramus in the oropharyngeal air spaces.⁵ Tonsilloliths frequently appear immediately inferior to the mandibular canal in the panoramic image. On CT images, they appear in the soft tissue medial to the mandibular ramus next to the lateral wall of the oropharyngeal air space. These calcifications appear slightly more radiopaque than cancellous bone and approximately the same as cortical bone. Differential diagnoses may be phleboliths, lymph node calcifications, calcified granulomas, diseases such as tertiary syphilis, tuberculosis, and deep fungal infections, and foreign bodies.^{7,8} No such treatment is required for most tonsillar calcifications. If the patient is symptomatic tonsilloliths may be expressed manually, possibly with the patient under sedation to suppress the gag reflex. Single large tonsilloliths are removed surgically, even if they are asymptomatic because recurrent episodes of tonsillitis can be anticipated.⁹ When tonsillitis is present, tonsillectomy can be carried out. Individual removal of these numerous tonsilloliths is not a feasible approach. Bilateral tonsillectomy would only be done to eliminate the tonsilloliths. Large calcifications with associated symptoms are removed surgically.⁵

Declaration of patient consent: The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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