



AN UNUSUAL CASE OF A GIANT TONSILLOLITH

Neha Salaria*, Uma Garg, Balwan Singh

Department of ENT & HNS, BPS Government Medical College for Women, Khanpur Kalan, Sonapat, Haryana.- 131305, India.

Corresponding Author:- **Neha Salaria**
E-mail: nehasalaria@gmail.com

<p>Article Info Received 21/04/2016 Revised 29/04/2016 Accepted 10/05/2016</p> <p>Key words: Tonsillolith, Giant, Palatine.</p>	<p>ABSTRACT Tonsilloliths are unusual dystrophic calcified calcareous concretions that occur within crypts of palatine tonsils. Though smaller tonsilloliths are common, their consolidation into giant tonsilloliths are quite rare entities and may present with a clinical dilemma regarding diagnosis and management to the physician. Herein we describe a case of 35 year female with an unusually large whitish unilateral tonsillar mass which on further evaluation turned out to be a giant tonsillolith.</p>
---	--

INTRODUCTION

Tonsillolith or tonsil stones are defined as a cluster of calcareous concretion in tonsillar crypts as a result of chronic inflammation of tonsils. Tonsilloliths are most commonly seen in palatine tonsils though rarely it may be seen in lingual tonsils as well [1]. Though small tonsilloliths may be quite discrete in presentation, larger tonsilloliths have a varied presentation. The presenting symptoms usually are recurrent tonsillitis, halitosis, pain, swelling in the tonsillar fossa and dysphagia. Referred otalgia and a foreign body sensation may be noted on swallowing [2, 3]. However, small tonsilloliths may frequently be asymptomatic and may occur as an incidental finding [4, 5]. Their mechanism of formation is a subject of debate. These calculi are mostly composed of calcium salts such as hydroxyapatite, carbonate and oxalates. Magnesium salts, sodium, silica, potassium, ammonia have also been reported [1]. They vary in size from small microscopic sizes seen during histopathological examination of excised tonsillectomy specimens (2%) to grossly visible intermediate sized tonsilloliths(8%) [1,6]. However giant tonsilloliths as seen in this case are rare entities and are important because of their relative rarity and as a result they may be misdiagnosed.

Case history

We present a case of 35 year old female presenting in the ENT outpatient department with chief complaints of right sided otalgia since one year. On inquiry she also had recurrent episodes of tonsillitis since 1 year, with aggravation of complaints since 1 month. There was associated difficulty in swallowing, along with a history of halitosis. There were no other relevant ENT complaints. Past history was uneventful except for recurrent medications for tonsillitis. Patient came from lower socioeconomic strata. There was no history of tobacco intake, betel nut chewing or any food intolerance.

General physical examination was within normal limits except slight pallor. On local intraoral examination the right tonsillar fossa revealed a whitish mass which was more towards the upper pole (Fig I). On palpation the mass was about 2 X 2 cm in size, hard, mobile and non tender. There was no palpable lymphadenopathy. Remaining parameters including aural evaluation was within normal limits. Lateral X ray neck revealed a radiopaque shadow. The biochemical investigations revealed haemoglobin 9gm/dl, serum calcium, phosphate and other investigations were normal.



The tonsillolith was removed by curettage under local anaesthesia. It was oval, about 2.6 X 2.5 X 2.3 cm in size and greyish white in colour (Fig II). Interestingly the tonsillolith had a lobulated appearance with a crypta magna like impression through it. It was one of the largest

tonsilloliths seen till date. On evaluation the stone primarily contained calcium carbonate and phosphate. Postoperative period was uneventful and patient is on regular follow up with no recurrence.

Fig 1. Preoperative picture revealing whitish tonsillolith protruding in the right tonsillar fossa



Fig 2. Tonsillolith after curettage (lobulated appearance)



DISCUSSION AND CONCLUSION

Lang reported the earliest tonsillolith in 1960 [7]. The palatine tonsils are composed of lymphoid tissue covered by mucosa with several crypts running through it. The age of patients reporting with tonsilloliths in literature varies from 10 to 77 years with a mean age of presentation being 50 years [2]. Tonsil stones are most often seen in adults who have chronic or repeated bouts of tonsillitis [2].

The exact aetiopathogenesis of tonsilloliths is unknown and is a subject of debate. Dystrophic calcification incited as a result of retained caseous secretions and organic debris, consisting of dead bacteria and debris from inflammation, epithelial tissue, and food, can be trapped at the base of the crypt and act as a nidus for salt precipitation [1, 2]. Other theories postulated include metastatic calcification which occurs in normal tissues as a result of hypercalcemia. However metastatic calcification usually occurs bilaterally and symmetrically. Other factors said to precipitate tonsillolith formation are hyperactive salivary glands, betel nut or tobacco chewing, intolerance to food or dairy products and salivary stasis [4]. Alternative mechanisms have been proposed including ectopic tonsillar tissue, minor salivary gland duct stasis leading to formation of calculi or peritonsillar abscess calcification [8].

Smaller tonsilloliths are generally asymptomatic contrary to large tonsilloliths as seen in this case which mainly present with recurrent attacks of sorethroat, referred otalgia and odynophagia [2, 4, 5]. Halitosis occurs as a result of release of volatile sulphur compounds produced from metabolism of anaerobic bacteria [3]. Clinically, the tonsillolith appears as a white or yellowish hard object within the tonsillar crypt. Tonsilloliths may be single or multiple and of variable shapes like round, oval, cylindrical, pyramidal or plurilobular [2].

Giant tonsilloliths as seen in this patient are uncommon and it may be difficult to diagnose them as they may resemble other aberrant anatomic structures as well as certain pathologic conditions due to their enormous size. They could be mistaken with prominent pterygoid hamular

process, large maxillary tuberosity, displaced third molar tooth or an elongated styloid process due to calcification of the stylohyoid ligament (Eagle's syndrome). Calcified peritonsillar abscess, lymph node calcifications, phlebolith, prominent arterial calcifications, osteoma, odontoma, fibrous dysplasia, calcified granulomatous disease, foreign bodies [2, 5] are other rare entities which tonsilloliths mimic. It is necessary to have a knowledge of these differentials in such presentations and a thorough examination and simple lateral X-ray of the neck, panoramic radiograph may help resolve clinical dilemma and confirm the diagnosis. A computed tomographic scan is the investigation of choice as it helps not only to locate the site size but extent of the pathology as well.

Tonsillolith is said to act as a living biofilm [6]. They act as localized colonies of aerobic and anaerobic bacteria that calcify over time. Bacteria colonise an epithelial or mucosal surface and in the presence of an extracellular matrix its treatment poses a therapeutic challenge [3].

It is vital not only to diagnose such unusual presentations but also to have a detailed view of the conditions which they can mimic as the course of management is variable for them.

Symptomatic tonsilloliths as in the current case discussed require treatment which usually involves removal of the tonsillolith by curettage, larger lesions sometimes may require incision for exposure. If there is evidence of chronic recurrent tonsilloliths or suspicion of malignancy, tonsillectomy offers definitive therapy [2, 3, 5]. Recently laser cryptolysis is also proposed in recurrent tonsilloliths. Carbondioxide laser may be used to smoothen surface and crypts of palatine tonsil thus preventing accumulation of debris and tonsillolith formation [8].

ACKNOWLEDGEMENT

None

CONFLICT OF INTEREST

The authors declare that they have no conflicts of interest.



REFERENCES

1. Weller CV. (1924). The incidence and pathogenesis of tonsillar concretions. *Ann Otol Rhinol Laryngol*, 33, 79.
2. Mesolella M, Cimmino M, Di MM, Criscuoli G, Albanese L, Galli V. (2004). Tonsillolith. Case report and review of the literature. *Acta Otorhinolaryngol Ital*, 24, 2004, 302-7.
3. Dykes M, Izzat S, Pothula V. (2012). Giant tonsillolith – a rare cause of dysphagia. *JSCR*, 4, 4.
4. William S Mekerrow. (2008). Diseases of Tonsil'. Scott Brown's Otorhinolaryngology and Head and Neck Surgery, 8th edition, Edward Hodder Arnold Publishers, 1224 – 1225.
5. Mandel L. (2008). Multiple Bilateral Tonsilloliths: Case Report. *J Oral Maxillofac Surg*, 66, 148-150.
6. Stoodley P, De Beer D, Longwell M, et al. (2009). Tonsillolith: Not just a stone but a living biofilm. *J Otolaryngology–Head and Neck Surgery*, 141, 316-21.
7. Pruet CW, Duplan DA. (1987). Tonsil concretions and tonsilloliths. *Otolaryngol Clin North Am*, 20, 305–309.
8. Gangaraj SS, Maruthi N. (2013). A case report of giant tonsillolith. *Int J Otorhinolaryngol Clin*, 5(2), 100-101.

