

CASE REPORT

Asymptomatic Large Sialolith of Wharton's Duct

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ABSTRACT

Aim: Giant salivary gland stones (more than 15 mm) considered to be rare and a few of well-documented studies report it. In this literature, we report an asymptomatic, 15 mm sialolith in a 47-year-old man with whole procedure of treatment.

Materials and methods: A patient without symptom of Wharton's duct sialolith was detected and treated. Occlusal cross-sectional of mandibule film was used to guide of surgery, transoral approach was made to dissection of stone.

Results: Fifteen millimeters yellow sialolith was obtained, antibiotic therapy done for 1 week was after surgery and 2-month follow-up was done.

Conclusion: Sialoliths are responsible for the obstruction of salivary secretion. More than 80 to 90% of sialoliths, occurs in the submandibular glandular parenchyma or its duct. There is man predilection in parotid or submandibular sialolith. Giant salivary gland stones (more than 15 mm) considered to be rare and a few of well-documented studies report it. Removal of sialolith with intraloral approach is treatment of choice in the anterior duct submandibular gland.

Keywords: Sialolith, Submandibular salivary gland, Wharton's duct.

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INTRODUCTION

Sialoliths salivary gland calculi account for the most common disease of the salivary glands,¹ 80 to 90% of sialoliths occurs in the submandibular gland or its duct.^{2,3} Salivary ducts obstruction result in periods of local pain specially during eating. Sialoliths can be single or multiple, can be unilateral or bilateral, and can vary in

shape and size.⁴ There are factors for sialolith formation: salivary stagnation, a nidus and a precipitation of salivary salts, infection, inflammation of the gland, or physical trauma to the duct or its orifice can be predisposing factor.⁵

Although some etiological aspects remain unknown, anatomical and biochemical components are certainly involved, leading to calcium salt deposition around accumulations of organic debris in the lumen of the duct or glandular parenchyma. This organic debris consists of condensed mucus, bacteria, desquamated epithelial cells, or foreign bodies.⁶⁻⁸ Sialoliths are rarely larger than 15 mm.^{1,3,5}

CASE REPORT

A 47-year-old patient with good health condition attended to oral medicine department for routine dental evaluation.

Clinical examination revealed purulent discharge in the left sublingual caruncle (upon milking of the left submandibular gland). Medical history was clear and patient was asymptomatic. Intraoral examination showed a palpable, no tender hard mass in the left floor of mouth (Fig. 1).

Following clinical examination submandibular duct calculi was detected.

Mandibular occlusal cross-sectional radiography was requested and showed large radiopaque conical mass in the left floor of the mouth (Fig. 2).

After informed consent, excisional biopsy was scheduled for patient with differential diagnosis of sialolith.

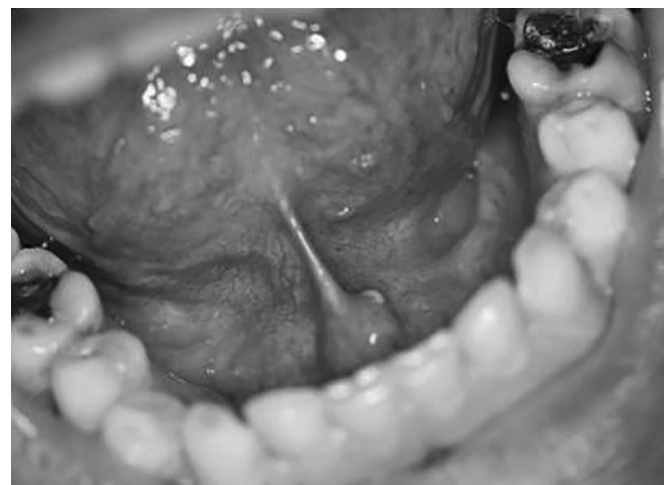


Fig. 1: Purulent discharge in the left sublingual caruncle

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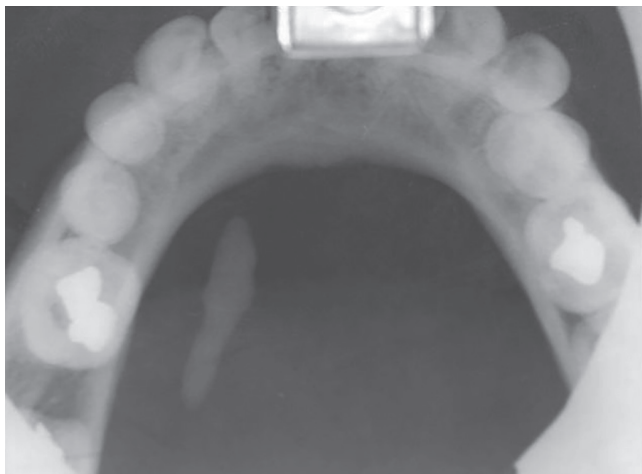


Fig. 2: Occlusal cross-sectional of mandible



Fig. 3: Dissected sialolith

Antibiotic therapy with oral CO—Amoxiclave 625 mg every 8 hours prescribed for the patient in order to decrease the discharge for 7 days before surgery.

RESULTS

Sialolith was located in the anterior portion of Wharton's duct. Stone was dissected by transoral approach under local anesthesia. A yellow 15 mm calculi was excluded. Oral cephalexin 500 mg twice a day and nonsteroidal anti-inflammatory drugs (NSAIDs) prescribed for his for 1 week. Patient was followed for 2 months, there was no problem (Fig. 3).

DISCUSSION

Sialolithiasis is the most common disease of the major salivary gland and a major cause of salivary gland dysfunction.^{5,6} Sialoliths are accompanied by a long-term sialadenitis which lead to the fibrosis and poor function of salivary gland. The obstruction resolve together with the flexible nature of the duct restore normal function.^{7,8}

Imaging methods include panoramic radiographs, occlusal radiographs, sialography, ultrasound, and computed tomography (CT).^{4,7} Recent studies stated that sialoliths are more frequent in men, which was the same with our study.^{1,4,9,10}

About 88% of sialoliths which has been reported are less than 10 mm and review of the literature showed the occurrence of salivary calculi larger than 15 mm rare.^{1,4,5}

In this case, patient had no symptoms and the sialolith was detected in routine intraoral examination, and dissection was done to prevent irreversible damage to submandibular salivary gland. Park et al¹¹ recommend that submandibular calculi be removed intraorally in order to preserve the gland, especially if the sialolith is palpable distal to the gland. As previously mentioned,

sialolithiasis is most commonly seen in the submandibular glands, which is due to the anatomical features of these glands—including the fact that the trajectory of the duct is long and tortuous, running counter to the force of gravity—and to the fact that the secretion produced by the glands is predominantly mucous.^{4,10-12}

Sialoliths lead to obstructing the salivary flow and causing episodes of pain and edema.^{4,9,11,12} In present case, the sialolith located in anterior region of the submandibular duct without any symptom that was detected during routine clinical examination.

We reported the case which includes managing of a sialolith with 15 mm length, located inside Wharton's duct, by intraoral approach with preservation of the submandibular gland. Each healthcare provider should develop a systematic routine in order to provide a thorough examination.¹³

REFERENCES

1. Silva-Junior GO, Picciani BLS, Andrade VM, Romans RT, Cantisano MH. Asymptomatic large sialolith of Wharton's duct: a case report. *J Stomat Occ* 2010;3(4):208-210.
2. Krishnan B, Gehani RE, Shehumi MI. Submandibular giant sialoliths-2 case reports and review of the literature. *Ind J Otolaryngol Head Neck Surg* 2009 Jan;61(Suppl 1):55-58.
3. Kamtane S, Ghodke M. Sialolithiasis: an unusually large asymptomatic submandibular salivary stone. *Serbian Dent J* 2013;60(1):42-47.
4. Martinsa R, Alvesa AFC, Juniora EM, Eliasa F, de Camposantra AC. Oral surgical—access for the treatment of bilateral submandibular sialolithiasis: case report. *Autopsy and Case Reports* 2012;2(2):37-41.
5. Bodner L, Sheva B. Giant salivary gland calculi: diagnostic imaging and surgical management. *Oral Surg Oral Med Oral Pathol Oral Radiol Endodont* 2002;94(3):320-323.
6. Neville BM, Dammnd D, Allen CM. *Bouquot-Patologia oral e maxillofacial*. 2nd ed. Rio de Janeiro: Guanabara Koogan; 2008.

7. Batroi M. Diagnosis and surgical management of submandibular gland sialolithiasis: report of a stone of unusual size. *Eru Med pharmacol Sci* 2005;9(1):67-68.
8. Lee LT, Wong YK. Pathogenesis and diverse histologic findings of sialolithiasis in minor salivary glands. *J Oral Maxillofac Surg* 2010;68(2):465-470.
9. Raksin SZ, Gould SM, Williams AC. Submandibular duct sialolith of unusual size and shape. *J Oral Surg* 1975 Feb;33(2):142-145.
10. Nahlieli O, Nader A, Baruchin AM. Salivary gland endoscopy: a new technique for diagnosis and treatment of sialolithiasis. *J Oral Maxillofac Surg* 1994;52(12):1240-1242.
11. Park JS, Sohn JH, Kim JK. Factors influencing intraoral removal of submandibular calculi. *Otolaryngol Head Neck Surg* 2006;135(5):704-709.
12. Fowell C, MacBean A. Giant salivary calculi of the submandibular gland. *J Surg Case Rep* 2012 Sep 1;2012(9):6.
13. Saini R. Sports dentistry. *Natl J Maxillofac Surg* 2011;2(2):129-131.