

A RARE CASE REPORT OF LARGE SUBMANDIBULAR DUCT CALCULUS

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ABSTRACT

Sialolithiasis is most commonly found in the submandibular gland and its duct (Wharton's duct). This report describes the case of a patient who had a painless very rare giant Submandibular sialolith visible per orally on the floor of mouth. A 2.5× 1cm sized stone was excised.

KEYWORDS: Sialolith; Sialolithiasis; Submandibular duct; Calculi.

INTRODUCTION

The great majority of salivary calculi (80%) occur in the submandibular gland and in the duct.^[1] Commonly, Sialoliths measure from 1mm to less than 1cm. Giant salivary gland stones (GSGS) are those stones measuring over 1.5cm and have been rarely reported in the medical literature.^[2] GSGS measuring over 3cm are extremely rare, with only scanty reported cases.^[3]

The purpose of this case report is to highlight a case of a very rare giant sialolith.

CASE REPORT

A 35 year old man was referred to us from a general medical practitioner with a diagnosis of non healing ulcerated floor of mouth [Fig 1]. The patient had been having recurrent bouts of intraoral infections for the past 3 years. Extraoral examination revealed no swelling and no palpable mass. Intraoral examination, revealed a ulcerated floor of mouth with pus discharge adjacent to the left Wharton's duct [Fig 1]. Sub mental view radiographs were obtained which revealed a large oblong radiopaque stone in the region of the left submandibular duct [Fig 2].

With informed consent of the patient, under local anaesthesia, the calculus was delivered intraorally after a mucosal incision using an artery forceps [Fig 3]. A 2.5× 1cm sized stone was excised [Fig 4]. Recovery of the patient was complete with no fresh complaints on follow up.



Figure 1: Intra oral examination revealed a swelling on the left side of floor of mouth with a yellowishtip.

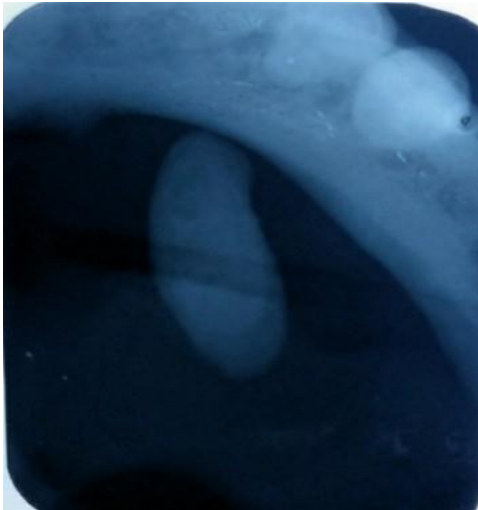


Figure 2: Sub mental view radiograph was obtained which revealed a large oblong radio opaque stone in the region of the left sub-mandibular duct.



Figure 3: Calculus was delivered intraorally after a mucosal incision.



Figure 4: A stone with a size of 2.5×1×0.5 cm.

DISCUSSION

Although submandibular sialolithiasis is usually seen among adult population, it can rarely be seen in the pediatric population.^[4] This may be because of the submandibular duct being longer, its flow being horizontal and in the opposite direction of gravity.^[5] The salivary gland stones are thought to grow approximately up to 1–1.5 mm in a year. The pathogenesis for the ability of sialolithiasis to grow to such an extent can be summarized as follows.^[6] In response to a sialolith growing in the duct, the duct may continue to expand at the same rate. However, if the size of the sialolith reaches a point where the duct can no longer expand, a sialo-oral fistula forms, and some part of the sialolith perforates into the oral cavity.^[7] Salivary calculi sometimes are associated with other salivary diseases, e.g. sialoliths occur in two thirds of cases of chronic sialadenitis.^[8] Giant sialoliths are classified as those exceeding 1.5 cm in any one dimension. Giant calculi are described as being hard in texture, yellow in colour.^[9] Although large sialoliths have been reported in both salivary glands and their ducts, stones larger than 3cm are rare

Mean size is reported as 6 to 9mm. A review of literature in 2007 found only 16 reported cases of sialoliths having a size up to 3.5cm.^[10]

Submandibular stones can be removed surgically through either intraoral or an external approach.^[10] Newer treatment methods are External lithotripsy and Interventional sial-endoscopy (including wire basket extraction and fibre optic laser lithotripsy).^[10]

CONCLUSION

This case highlights a giant Submandibular duct stone in a patient with poor oral hygiene. Patients should be educated regarding the underlying pathology and emphasizing the value of adequate hydration and oral hygiene. Development & recurrence of salivary gland stones can be prevented by following simple habits like drinking plenty of water practising good oral hygiene. Once the diagnosis is established attempts at removal by minimally invasive techniques should be considered.

Conflict of interest: Nil.

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