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CaseReport

Sialolithiasis of submandibular salivary gland with acute suppurative sialadenitis: A case report

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ABSTRACT:
One of the most common disorders of the salivary glands is sialolithiasis[1]. Sialolithiasis is the formation of calcific concretions within the parenchyma or ductal system ofthe major or minor salivary glands, but it most commonly affects the submandibular salivarygland[2].The treatment of sialolithiasis depends on the size and location of the calculi. For small and accessible stones conservative therapies like milking of ducts with palliative therapy can produce satisfactory results. Surgical management should be considered when the stone/stones are inaccessible or large in size as conservative therapies turned out to be unsatisfactory[1]. This article presents a case of sialolithiasis with acutesuppurativesialadenitis of the left submandibular salivary gland and managed via the intraoral approaches.
Keywords: Sialolith, AcuteSuppurativeSialadenitis

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INTRODUCTION

The submandibular gland (a major salivary gland) is a mixed, predominantly mucous glandwith a large superficial section and small, deep lobes that connect around the posterior border of the mylohyoid muscle at the angle of the jaw [3,4]. The submandibular duct arises from thedeep part of the gland from the floor of the mouth along the lateral side of the frenulum linguae[5]. Wharton's duct rests at the lower level of the oral cavity, and this location allows for retrograde infection of the gland by oral flora. The pH of saliva in the submandibular gland is alkaline[6], which may lead to the formation of calcium salts[7].Sialolithiasis is considered to be the most common salivary gland disorder and it accounts for about 1.2% of unilateral major salivary gland swellings. Submandibular gland has the highest predilection for sialolithiasis with 80% occurrence rate, followed by the parotid (19%) and the sublingual (1%) glands[1].

CASE PRESENTATION

A 25 years old malepatient reported to the department of Oral Medicine and Radiology with the chief complaint of recurrent swelling in lower Left back region of jawsince1 years. Swelling getsaggravated after chewing food and subside within 5-10 min. and is accompanied bypain which was dull and continuous in nature. Patient started experiencing pus discharge since 1weeks from the same region.On extraoral examination mild swelling noted on the left submandibular region which was soft, fluctuant with rise in temperature and was tender on palpation.On intraoral examination obliteration of the left side of the floor of the mouth noted. On bimanual palpation left submandibular salivary gland was soft and fluctuant in consistency with active pus discharge were noted and left submandibular lymph node were enlarged and tender on palpation. (Figure 1A-D). On the basis of clinical examination provisional diagnosis was given as acutesuppurativesialadenitis.

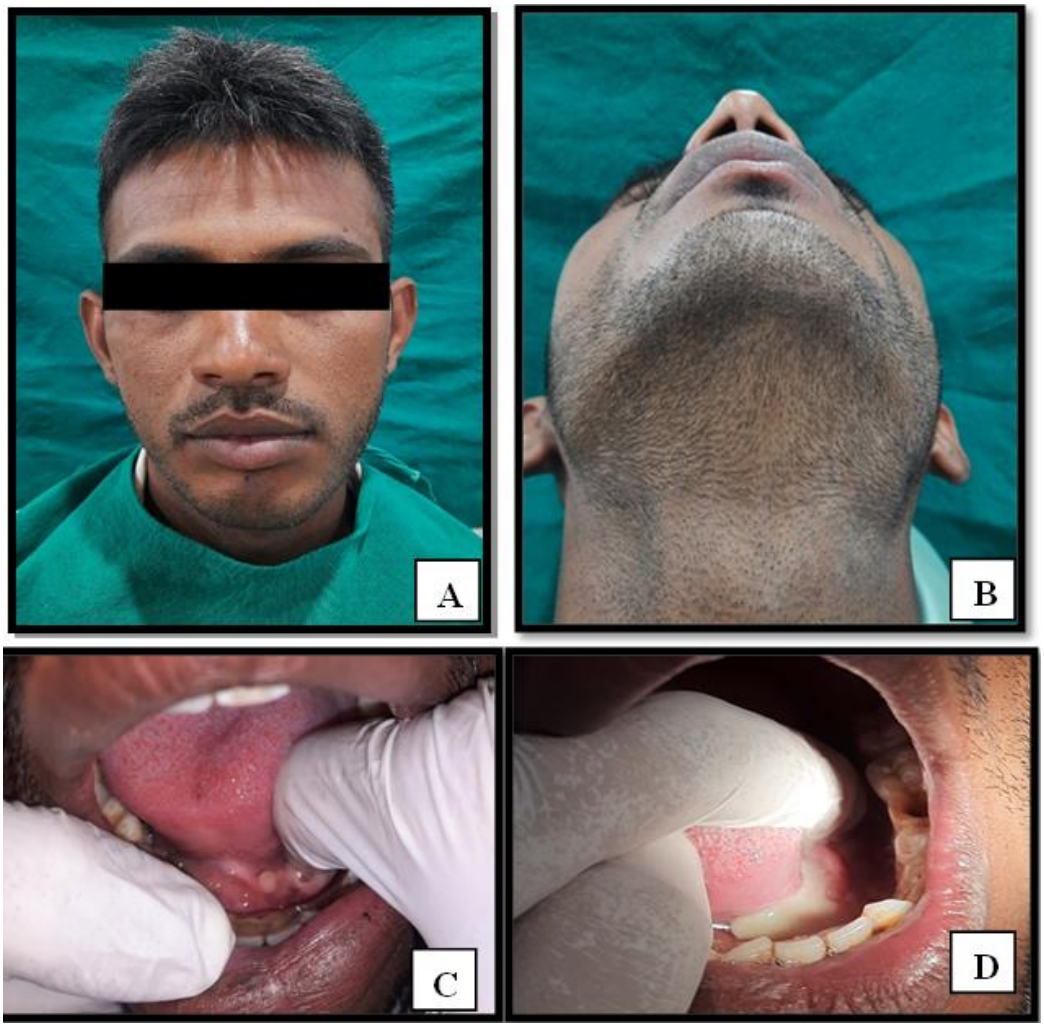

FIGURE 1:(A) Extraoral Profile (B)Mild swelling noted on the left submandibular region (C)Inflamed orifice of duct with pus discharge (D)Pus discharge noted from left submandibular gland.

Patient has been advised for radiographic investigation. Mandibular occlusal radiograph was taken which shows a well-defined, single, ovoid shape radiopacity of approx. 1cm in dimension noted in the left submandibular region. (Figure 2). On OPG well defined radiopacity noted at the periapical region of 33 &34 region (Figure 3). On CBCT, well-defined radiopacity in the left submandibular region (Figure 4). Patient has been advised for USG of left submandibular salivary gland to rule out the pathosis which shows enlarged left submandibular gland, heterogenous in echotexture and reveals a large 8-9mm calculus in its duct, filled with low level echoes suggests obstructive sialadenitis (Figure 5). On the basis of clinical and radiological findings, we diagnosed the case as acutesuppurativesialadenitis.

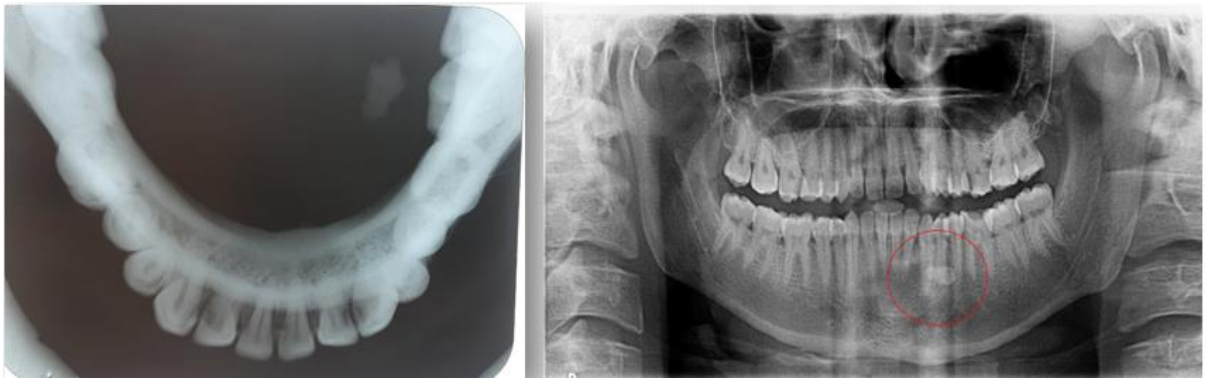

FIGURE 2: Occlusal radiograph showing salivary gland calculi
FIGURE 3: OPG showing well defined radiopacity at the periapical region of 33 &34 region.

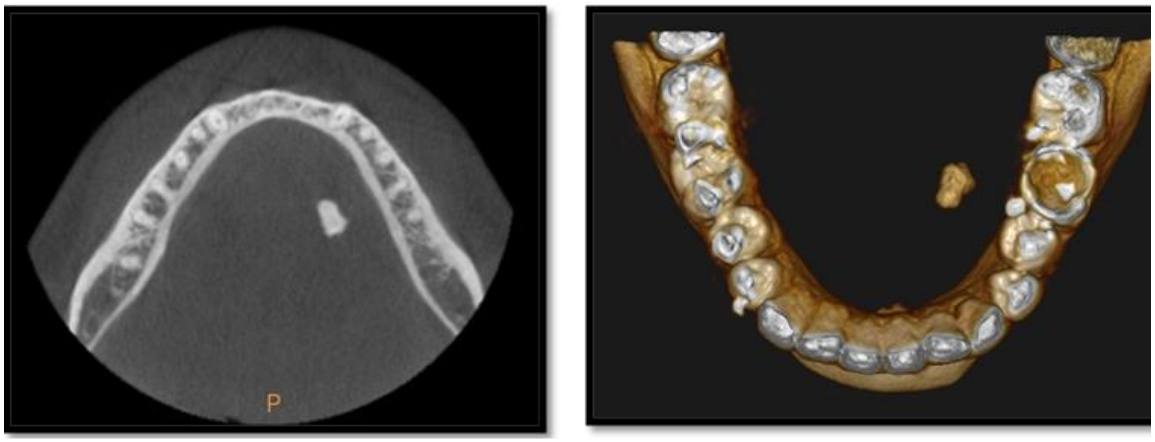

FIGURE 4: CBCT, Axial section showing well-defined radiopacity in the left submandibular region.

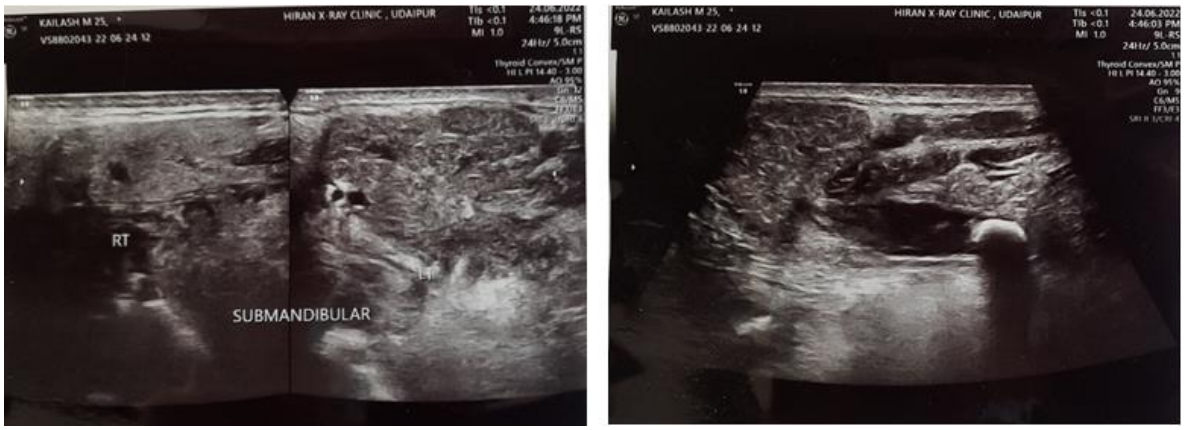

FIGURE 5: USG showing enlarged gland heterogenous in echotexture and reveals a large 8-9mm calculus in its duct.

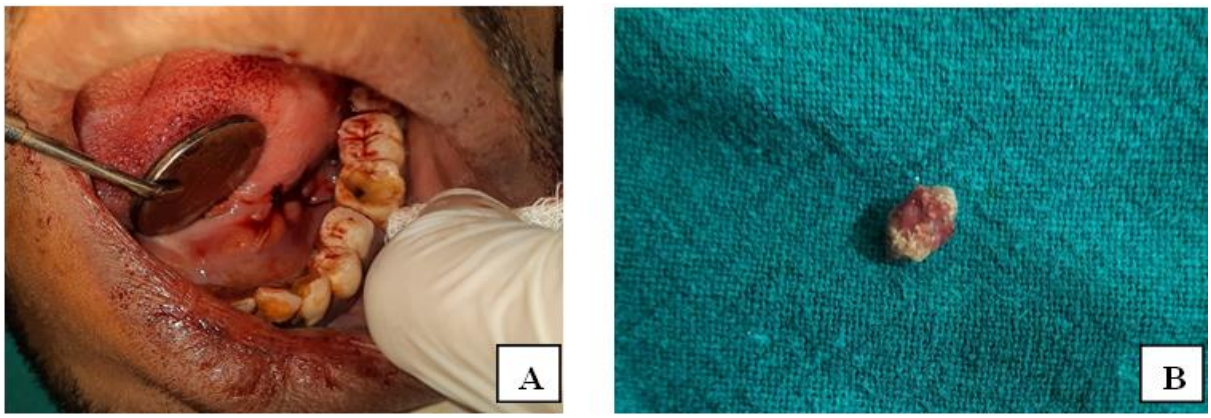

FIGURE 6:(A)Intraoral incision given(B)Calcification

After the complete radiographic and blood investigations which were under normal limits, patient has been advised for the surgical removal of the sialolith.Under local anaesthesia, an intraoral incision was made in the floor of the mouth. The duct was opened and the sialolithwas removed in a single piece which was approx.1cm in length and sutures were placed to close the area.

DISCUSSION

The submandibular gland (a major salivary gland) is a mixed, predominantly mucous gland. The pH of saliva in the submandibular gland is alkaline [6], which may lead to the formation of calcium salts[7]Sialolithiasis is considered to be the most common salivary gland disorder and it accounts for about 1.2% of unilateral major salivary gland swellings. Submandibular gland has the highest predilection for sialolithiasis with 80% occurrence rate, followed by the parotid (19%) and the sublingual (1%) glands[1].Sialolithiasis is the formation of calcific concretions within the parenchyma or ductal system of the major or minor salivary glands.

In present case 25 years old male patient with a history of recurrent swelling in lower Left back region of jaw since1 years and history of pus discharge since 1weeks. Imaging modalities including both conventional and advanced radiographs were taken to rule out the sialolith. USG of the left submandibular gland were advised to rule out the pathosis which shows enlarged gland heterogenous in echotexture and reveals a large 8-9mm calculus in its duct.
Based on the complete radiographic and blood investigationssurgical removal of the sialolith was done under local anaesthesia through intraoral approach.

CONCLUSION

Sialolithiasis is a common salivary gland disorder,submandibular gland has the highest predilection for sialolithiasis with 80% occurrence rate because of the mixed secretion, positioning of the gland and the curved duct. Properhistory,clinicalexamination and radiographic examinations are crucial for establishing the final diagnosis and treatment protocol.

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