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Case Report

Anterior submandibular sialolithiasis: A series of five cases

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Abstract

Submandibular gland is most often affected by the development of sialolithiasis as compared to parotid gland.[2] Sialolithiasis accounts almost 30% of all salivary disorders and higher incidence is found in males.[3] This article reports a series of five cases of submandibular sialolitiasis and describes their successful management in our institute.

Keywords: Extracorporeal shock wave lithotripsy (ESWL), Salivary gland, Sialolith, Sialolithiasis, Submandibular gland, Salivary gland stone.

Introduction

"Sialon" means "Saliva" and "Lithos" means "Stone". Calculi formation within a salivary gland or its associated duct is known as the "Sialolithiasia". Almost 85% of sialolithiasis cases are of submandibular gland sialolithiasis.[10] Young individuals and middle-aged adults are most commonly affected by salivary stones. Rarely, it affects children.[2,4] Submandibular gland is most commonly affected by sialolithiasis due to its duct's tortuous course.[3] Etiology of sialolithiasis is unclear. Dehydration, calcium metabolism disturbances, precipitation of minerals are most likely causes for the formation of sialolithiasis.[10] Presence of anatomical variations of salivary duct can also lead to sialolithiasis.[8] Presence of sialolithiasis can be diagnosed by radiographic examination, ultrasound examination or sialogram.[10] This article describes a series of five cases of anterior submandibular sialolitiasis and their management.

Case Series

We are presenting five cases of anterior mandibular sialolithiasis. All these patients were asymptomatic. On clinical examination, small swelling was seen at floor of oral cavity in the anterior region. Radiograhic examination was adviced to all these patients. On occlusal radiographs, radiolucent mass was seen. In all these cases, surgical excision of sialolith was performed under local anaesthesia. In all cases, longitudinal incision was taken on the mouth floor. In few cases, suture material was used as traction while excising sialolith. Fig. 1 to 5 describes clinical pictures of all these cases. Surgical closure was performed with mersilk suture and patient was recalled for follow up. Suture removal was performed when healing was noticed satisfactory. In none of the cases, recurrence was seen.

Fig. 1: Clinical Photographs of Case no.1

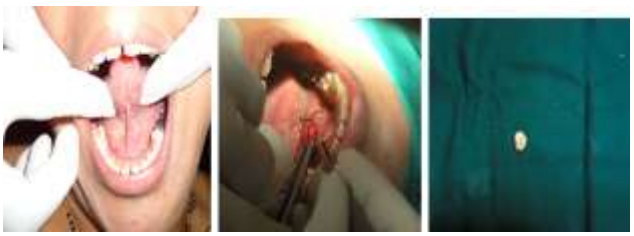

Fig. 2a: Clinical Photographs of Case no.2

Fig. 2b: Occlusal radiograph of Case no.2

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Fig. 3: Clinical Photographs of Case no.3

Fig. 4: Clinical Photographs of Case no.4

Fig. 5: Clinical Photographs of Case no.5

Discussion

Sialolithiasis is also known as "salivary gland stones".[5] Almost greater than 50% of salivary gland diseases are contributed by Sialolithiasis and most commonly it is associated with submandibular gland. Sialolithiasis affects males twice as compared to females and it rarely affects children.[4] According to researchers, sialolithiasis occur due to calcium salts deposition near a nidus of debris present in the lumen of salivary duct. The path of the submandibular gland is tortuous and it is projected upwards. This is also one of the reason of submandibular gland sialolithiasis.[2]

On clinical examination, sialoliths are mostly asymptomatic but they can produce tenderness or swelling of the affected gland. On radiographic examination, sialoliths are noticed as radio-opaque masses. Occlusal radiographs are best to demonstrate this entity. Imaging studies like sialography, CT Scan and ultrasound examination are helpful for examination of sialoliths. Histopathologic examination reveals concentric laminations of the calcified mass.[1,2,3]

Ultrasonography is considered as first choice examination in diagnosing sialolithiasis. Sialo- magnetic resonance imaging is one of the recent technique for diagnosing sialolithiasis.[3] In case of major gland sialolithiasis, small sialoliths can be managed conservatively, i.e, by massaging the gland to milk sialolith towards orifice as well as moist heat and sialogogues can be advised. Major sialoliths can be excised surgically. In cases of minor gland sialolithiasis, surgical excision is the best treatment option. Minimally invasive techniques like salivary gland endoscopy, shock wave lithotripsy are recent techniques for the management of sialolithiasis. Extracorporeal shock wave lithotripsy (ESWL) changed therapeutic approach in sialolithiasis patients.[3]

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Conflict of Interest

None.

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