



Surgical Management of Sialolithiasis: A Case Report

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Abstract

Presence of hard structure made up of calcified organic and inorganic substance in salivary gland is known as Sialolithiasis. Incidence rate is 1.2%. Submandibular gland is most common site. A 27 years old male reported to us with complain of swelling and pus discharge from left side of floor of mouth. Sialolithiasis of left submandibular gland was diagnosed based on clinical and radiographic examination. The sialolith was removed under local anesthesia.

Keywords: Sialolithiasis, Submandibular gland, radiographic examination.

Introduction

Stone or Calculi formation in salivary gland is known as Sialolithiasis. It is made up of organic substance form due to abnormality in calcium metabolism and salt precipitation which results in formation of a nidus which causes layering of organic and inorganic material which forms calcified mass known as sialolith. Incidence rate is 1.2% in adult population. Occurs twice as often in men than women. Multiple stones may be present in 25% of population. Stones occurs more frequently in submandibular gland(80%) because it is more alkaline and contains more calcium than parotid gland (6-15%) and sublingual gland (2%).

Report of a Case

A 27 year old male came to the Department of Oral and Maxillofacial Surgery of Maharishi Markandeshwar Dental College and Hospital Mullana with chief complain of swelling on chewing food and pus discharge from left side floor of mouth since 1 year. Swelling is not associated with pain. The patient was apparently healthy condition without any relevant medical history.

Extraoral examination was non significant. Intraoral examination revealed swelling on left side of floor of mouth approximately 2 cm in size.

On the basis of clinical and radiographic examination sialolithiasis of submandibular gland was diagnosed.

After administration of Local anesthesia. Intraorally Sialolithotomy was done. Stone was

identified and a ligature suture was placed. Incision was given directly over the pathology to expose it. After exposure a hard yellowish white mass of size approx 2cm was obtained. There was no sign and symptoms of xerostomia after 3 months of surgical procedure.



Fig 1: Intraoral view showing soft Elevated lesion on left floor of mouth



Fig 2: Ligature suture placed



Fig 3: Delivery of Sialolith



Fig 4: Specimen of 2 Cm approx



Fig 5: Occlusal radiograph showing a radiopaque mass near left side of floor of mouth



Fig 6: Lateral cephalogram showing radiopaque mass near left floor of mouth

Discussion

Calcified structures develop within salivary ductal system because of deposition of calcium salts around a nidus of debris which includes mucus, bacteria, ductal epithelial cells or foreign bodies. It mainly composed of calcium phosphate, hydroxyapatite, magnesium, potassium and ammonia¹. Two treatment modalities are follow to treat the sialolithiasis. Conservative management used to treat small sialolith of major glands which include gentle massage. Large sialolith is treated by surgical management.

In this case sialolith was located in submandibular gland which is most susceptible to calculus formation as submandibular gland saliva contains twice the amount of calcium and has more alkaline pH than that produced from other glands². Incidence of sublingual gland sialolithiasis is very rare with incidence of 7%³. It was associated with pus discharge because of secondary infection.

In recent advancement Endoscopy used for diagnostic purpose to locate sialolith and for obstructive and inflammatory disorders of the gland and sialoendoscopy is indicated for removal of sialolith where it adhere to ductal system. Major advantage of sialoendoscopy is to preserve the glands and restore function with only few potential complications in a minimally invasive manner.

According to Soares et al⁴, intraductal stones may be removed by a transoral approach, whereas for intraglandular stones, an extraoral submandibular gland excision is indicated. Six months after surgery our patient showed no sign and symptom of xerostomia and normal salivary flow from left submandibular gland.

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