

## A Rare Case of Parotid Gland Sialolith

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DOI: [10.36348/sjodr.2020.v05i12.004](https://doi.org/10.36348/sjodr.2020.v05i12.004)

| Received: 29.11.2020 | Accepted: 12.12.2020 | Published: 16.12.2020

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### Abstract

Parotid gland sialolith is a very rare condition with symptoms of pain and infection in affected individuals (4- 10%) caused due to any systemic diseases, bacterial infections, medications, abnormality in the secretion of gland etc. Here reporting a case of 28 year old male patient having calculi in his left parotid gland. Routine radiographic procedures and advanced modalities like ultrasonography, cone beam tomography confirmed the diagnosis then it is removed surgically without major complications.

**Keywords:** Sialolith, parotid, salivary gland, salivary gland dysfunction, calculi, sialolith removal.

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### INTRODUCTION

Sialoliths are the main cause of obstruction to salivary gland leading to salivary ectasia and dilatation of gland. Frequency of formation of calculi in various glands as follows, submandibular glands (83-94%), parotid (4- 10%), sublingual (1-7%) [1, 2]. Alkaline, viscous, mucus rich nature of saliva having higher percentage of calcium phosphates, the long and sinuous position of whartons duct, will cause stasis thereby submandibular salivary system become more prone for development of sialoliths than the parotid gland. Males are more commonly affected. Systemic diseases like gout, Sjogrens, medications like anticholinergic and antisialogogue drugs, any history of trauma, head and neck radiotherapy, elderly patients, Alzheimer's and Parkinsons disease, stroke, cystic fibrosis and renal dysfunction also cause sialolith formation [3, 6, 1, 7]. Management of the condition depends on the size and location and severity of symptoms. Smaller stones may be managed by conservative treatments mainly by hot compresses, massage, increased oral fluid intake and sialogogues like lemon. Surgical treatment is done mainly to prevent recurrent parotitis [4]. Most of the

sialoliths are about 5 mm and which is above 10 mm should be reported as sialolith of unusual size [8, 10].

### CASE REPORT

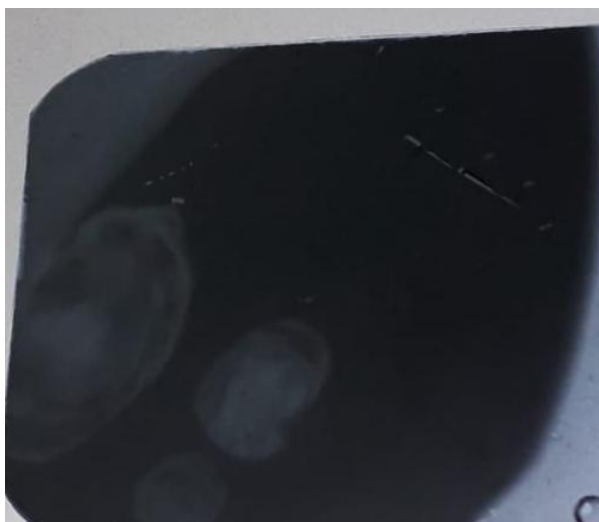
A healthy 28 year old young male patient presented to department of oral medicine and radiology with a chief complaint of pain and swelling in his left side of cheek since 3 months. Pain aggravates on consumption of food. Examination of face demonstrated diffused indurated left facial swelling measuring about roughly 1 cm in diameter situated antero posteriorly along the zygomatic arch and 2 cm inferior to outer canthus of eye. There is no localized rise in temperature overlying skin and it was tender on palpation. Intraoral examination revealed non tender, mobile swelling distal to 27 regions. No pus discharges from parotid papilla on milking of gland. IOPAR and OPG was taken which revealed calculus situated distal to 28. Ultrasound and CBCT was also done and diagnosed as left chronic parotid sialadenitis with sialolithiasis. Patient was given a course of oral antibiotics and referred for surgical excision after 3 days under local anesthesia. Calculi of 10 mm, 8 mm of

diameter were removed and follow up done for a month. The patient recovered without many complications.

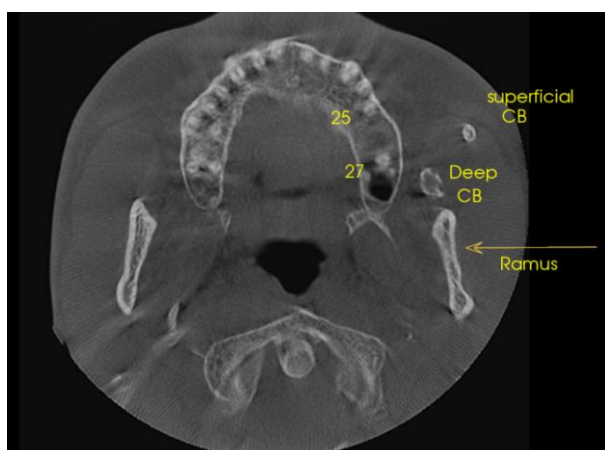
## INVESTIGATIONS



**Fig-1: OPG revealing radiopaque structure distal to 27**



**Fig-2: IOPAR showing multiple calculi**



**Fig-3: CBCT revealing localization of calcified masses,**



**Fig-4: CBCT anterior view**

Ultrasonography- impression - left chronic parotid sialadenitis with sialolithiasis blood investigations – unremarkable



**Fig-5: Calculi after surgical retrieval**

## DISCUSSION

Sialoliths in some cases are asymptomatic and diagnosed incidentally during routine radiographic examinations. Other symptoms are pain and swelling of the gland while eating and there will be gradual reduction of swelling [2]. On palpation, there will be feeling of small pebbles like structures [3]. Submandibular and parotid salivary stones have similar structures like amorphous, mineralized core surrounded by concentric layers of organic and inorganic material [5]. Ultrasonography is one of the standard aids used to diagnose sialoliths. Conventional sialography have risk of perforation to ducts and retrograde displacement of stone [9]. Sialoendoscopy, CT scan and MRI are other common diagnostic aids. In case of small calculi natural sialogogues can be given, drugs like pilocarpine and short wave infrared waves will cause contraction of ducts. Lithotripsy is another option for glands not responding to conservative treatment and parotidectomy is the last treatment option [9].

## CONCLUSION

Parotid gland sialoliths are rare. Ultrasonography along with radiographic investigations help in the diagnosis of sialoliths. There are various treatment options available for the management of sialoliths. Need of further researches are needed in diagnosing and managing this condition more effectively.

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