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CASE REPORT

PAROTID SIALOLITH- A CASE REPORT

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ABSTRACT:
Parotid sialoliths are uncommon and they cause recurrent swellings of the gland due to obstruction. Early diagnosis by the dental practitioner can prevent the complications associated with the pathology by instituting an early treatment. The treatment is surgical depending of the location of the stone.

Keywords: Sialolith, Parotid stone, Parotid calculus

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INTRODUCTION

Sialolithiasis commonly affects the major salivary gland with patient presenting with recurrent swellings. Swellings can occur due to obstruction or due to ascending infections. Recurrent swelling due to presence of salivary calculus can be caused by either or both of these mechanisms[1]. Diagnosing the parotid stones is important to dentists because people with this condition develop parotid swellings and may seek routine dental care. Early diagnosis and treatment can reduce the progression of the pathology and hence complications.

Calculi usually affect the submandibular gland or its duct due to anatomic location & viscous nature of salivary secretions from the gland, while the calculus involving the parotid gland or duct is uncommon.

Calculus in the extra glandular part of parotid duct which is superficial to the buccinator muscle can be reached via an incision in the oral aspect of the cheek.

CASE REPORT:

21 year old female presented with chief of pain and swelling for the last 2 weeks. On taking the history, it was observed that the swelling had been there for the last 4 months and she used to have episodes of pain and swelling for which she was prescribed some antibiotics and analgesics. Swelling used to increase while taking food. There was no history of fever or pus discharge. On palpation, a hard mass was noticed below the parotid papilla. Mass could be moved towards the papilla when pressed from the cheek extra-orally. A radiograph taken with an intra oral periapical film placed in the region of papilla confirmed a radiopaque mass (Figure 1). A diagnosis of parotid sialolith was made and surgery was planned intra orally under local anesthesia.

After infiltrating the surgical site with lignocaine with adrenaline, a classic Y-shaped incision with tail directed forwards was made around the tip of papilla. The two divergent limbs of the Y pass a little above and a little below the papilla and meet in front of papilla. The horizontal stem of the Y-shaped incision remains in continuity from upper limb and passes forwards from the papilla (Figure 2). 3-0 black silk suture was inserted at the tip of V outlined by the incision.

The mucosa and submucosa were dissected of the buccinator muscle and a triangular flap consisting of submucosal part of the duct was raised which was retracted posteriorly with the help of suture. Inward pressure from cheek helped in palpating the stone in the anterior part of the duct. Since, the stone could be palpated in the most anterior part of the duct so the further dissection was not required. If required, further dissection over the submucosal part of the duct will lead to the dissection to point where duct disappears into the cheek in

the region of buccinator dehiscence and the buccinator muscle can be slit to trace the duct into the cheek and a sialolith can be retrieved from the proximal part of the extra glandular portion of duct.
An incision was given over the duct and stone of the size 8 mm X 5 mm was exposed (Figure 3) and retrieved (Figure 4).

Figure 1: IOPA showing radiopaque mass

Figure 2: Y shaped incision

Figure 3: Sialolith inside the duct

Figure 4: Sialolith removed

The area was irrigated with normal saline and a free flow of saliva was noticed from duct. Mucosa was sutured with 3-0 silk while the duct was not sutured. Postoperative healing was uneventful.

DISCUSSION:

Sialolith is a common pathology reported by the patient in the dental office, Submandibular sialolithiasis is frequent (both intraglandular and in Wharton's duct) while sialolith in the Stensen's duct and inside the parotid gland is rare and is difficult to diagnose.
Dental practitioners have the opportunity and can play an important role in the diagnosis and hence referring the patient to the specialist for the management. To do so, however, the general practitioner must become familiar with the etiology, symptomatology, diagnostic techniques and treatment of parotid stones.
Bacteria, desquamated epithelium, a foreign body or increased quantities of high-molecular-weight serum proteins escaping from an infected and permeable duct wall and forming a mucous plug can all serve as a nidus that obstructs salivary flow. Stasis with chemical precipitation of calcium salts into the nidus results leading to formation of sialolith. Parotid duct stones can form at any age. Most of the sialoliths are located within the extraglandular portion of Stensen's duct especially at the anterior border of masseter muscle where it makes the right angle bend and perforates the buccinator muscle. Few are in the intraglandular duct system.
Parotid duct stones cause obstructive symptomatology, especially during the meal times as an increase in flow of the saliva occurs at the time of meals which can lead to swelling and pain. Symptoms decrease after the meals since retained saliva seeps from the duct but stagnation of the saliva can lead to infection and hence recurrent parotitis develops. Acute exacerbation of the parotitis can lead to pain, fever and purulent discharge from the duct if milked extraorally. Thorough knowledge of the anatomy and clinical symptoms can help the general dental practitioner to diagnose the sialolith and early treatment can be instituted. An early management of the sialolith can prevent further complications of infection and glandular degeneration
Radiology also plays an important role in the diagnosis. A periapical film placed intraorally on the cheek; slightly posterior to the orifice of the duct will help in visualizing the anterior portion of the duct and sialolith, if present. A posterioanterior radiograph with puffed cheek and ultrasonography is also helpful in diagnosing. CT scan had also got a high sensitivity in diagnosing the parotid sialolith especially of small size[2]. Noncalcified sialoliths are best seen on a sialogram, but small faintly calcified stones can be obscured by contrast.
Stones in the extra glandular portion of the duct can be easily accessed from the intraoral approach. Combined

endoscopic and ultrasonic approach has also been suggested for the stones which could not be retrieved by intraoral approach[3]. Removal of a parotid duct calculus using a Dormia basket is also described in the literature[4,5]. Parotidectomy is required for stones in the intraglandular portion of the parotid gland.

CONCLUSION

Sialoliths are common occurrence but parotid sialoliths are rare. A good knowledge of the clinical symptomology, diagnosis and the treatment options help the patient to treat the pathology in the early stage of the disease without causing the progression and hence the associated complications.

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