

RECURRENCE OR MISDIAGNOSIS?

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Introduction

Sialolithiasis is a benign condition associated with the formation of calculi in the ducts of major salivary glands :parotid , submandibular and sublingual glands^[1] or minor salivary glands, with most common predisposition of about 85% within the duct of submandibular gland owing to the mucinous nature of the secretions and torturous anatomy of the duct^[2]. The submandibular gland also produces more alkaline saliva, which predisposes to precipitation of inorganic salts (i.e., calcium and phosphate), further leading to salivary stone formation. Approximately 15% of salivary stones occur within the parotid gland, and less than 5% occur within the sublingual and minor salivary glands^{[4][5]}. It is the most frequent cause of salivary gland swelling, with a reported incidence of 1 in 10000 to 1 in 30000,with primary age of diagnosis between 30 and 60 years^[3]. In some cases, sialoliths can obstruct the salivary ducts, leading to inflammation, superimposed bacterial infection termed sialadenitis, or in rare cases, abscess formation. There are various presenting symptoms, with the most common being cyclical postprandial swelling of the affected gland and decreased salivary flow^[4].

CASE DESCRIPTION

A 42 year old male patient presented to the OPD at the Department of Oral and Maxillofacial Surgery after a reference from the Department of Otorhinolaryngology with a complaint of pain and unpleasant tasting discharge in the mouth since 45days .The patient apparently presented at the onset of symptoms like pain and swelling over the left lower third of face about 30 days ago in the Department of Otorhinolaryngology and was treated for the same with Incision and Drainage and was administered intravenous antibiotics resulting in relief of symptoms only to notice recurrence of swelling in the following 7days and minimal response to antibiotic coverage . An Ultrasonographic evaluation of the swelling in question was done

and an area of inflamed tissue and exudate associated with a calculus in the submandibular salivary gland .The patient presented a history of a second surgery during which the submandibular salivary gland was excised and the tissue was sent for histopathological evaluation which was suggestive of sialadenitis. During the follow up visit , intraoral discharge and pain in the sub mandibular region persisted .

On examination , extraoral area of fibrosis in the submandibular region was palpated associated with tenderness . Intraorally , pus discharge was noticed from the Wharton's duct opening on the left lateral aspect of tongue. On palpation ,a hard mass was noticed in close proximity to the opening along the floor of mouth .

An Orthopantomogram was taken for confirmation of a suspected Sialolith .A radio opaque mass was seen on the left side in relation to the first molar .The mass was localised with the help of a CBCT scan.



Management

Parts were scrubbed and painted and the left submandibular salivary gland duct opening was explored while localising the calculus and the calculus was removed. The patient was given post operative antibiotics and analgesics and is being kept under frequent follow up.



Discussion

The exact pathogenesis of sialolithiasis is not well understood, but two dominant theories were suggested. One of them proposes that there are multiple internal micro calculi within salivary gland secretory granules. When these micro calculi get secreted into the salivary ducts, they may act as a nidus for the formation of larger calculi, ultimately forming a sialolith^[6]. The second hypothesis suggests bacteria or food debris within the oral cavity enter the distal submandibular or parotid ducts. Over time, this organic substrate may act as a nidus for the formation of larger calculi^[7].

Swelling and pain are the cardinal signs of sialolithiasis, and proper diagnosis depends on taking adequate patient history along with a clinical evaluation. X-ray imaging can help in the diagnosis, but smaller or hypomineralized calculi can only be found via other radiographic methods like sialography, ultrasound, CT, magnetic resonance imaging (MRI), scintigraphy, and sialoendoscopy^[4]. A recently developed method to directly visualize sialoliths within ducts is sialoendoscopy—a new method that mitigates conventional radiology in the event of suspected salivary obstruction^[8].

CONCLUSION

Sialolithiasis is a common salivary gland disorder, especially for the submandibular gland. Preoperative history and clinical and radiographic examinations are crucial for establishing the clinical diagnosis and treatment protocol.

REFERENCES

1. Jonathan T. Hammett; Christopher Walker, Sialolithiasis
2. B Shivapatha Sundaram, Shafer's Textbook of Oral Pathology, New Delhi, Elsevier, 2012
3. Huoh KC, Eisele DW. Etiologic factors in sialolithiasis. Otolaryngol Head Neck Surg. 2011
4. Rzymska-Grala I, Stopa Z, Grala B, Gołębiowski M, Wanyura H, Zuchowska A, Sawicka M, Zmorzyński M. Salivary gland calculi - contemporary methods of imaging. Pol J Radiol. 2010 Jul
5. Andretta M, Tregnaghi A, Prosenikliev V, Staffieri A. Current opinions in sialolithiasis diagnosis and treatment. Acta Otorhinolaryngol Ital. 2005 Jun
6. Harrison JD. Causes, natural history, and incidence of salivary stones and obstructions. Otolaryngol Clin North Am. 2009 Dec

7. Marchal F, Kurt AM, Dulguerov P, Lehmann W. Retrograde theory in sialolithiasis formation. Arch Otolaryngol Head Neck Surg. 2001 Jan
8. Sialolithiasis management: the state of the art. Marchal F, Dulguerov P. <https://jamanetwork.com/journals/jamaotolaryngology/fullarticle/483947> Arch Otolaryngol Neck Surg. 2003