SIALOLITH - A RARE CASE REPORT

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Sialolithiasis is one of the most common diseases of the salivary gland. The submandibular gland and its duct appear to be the most susceptible site for this condition. The sialoliths are yellow and may be round, ovoid or elongated. It may measure a few millimeters or some times 2 cm or more in diameter. This is a case report of a patient with a giant sialolith in the submandibular duct measuring 4.3 cm long.

Key Words: Giant salivary sialoliths , Submandibular duct

Sialolithiasis is the second most common disease of the salivary glands after mumps. It is also the most common disease of submandibular gland in middle-aged adults. Sialolithiasis is estimated to affect 12 in 1000 of the adult population with males being affected almost twice as much as females[1]. The clinical symptoms include swelling and pain in the affected gland. If the blockage of the duct is complete, the symptoms will be quite severe. The pain and swelling may be recurrent and most pronounced at meals. The objective of this article is to present a case of a giant sialolith and to report the review of literature on giant sialoliths (4.3 cm or larger). It also gives light on the differential diagnosis and treatment modalities of this condition.

REVIEW OF LITERATURE

Sialoliths are condensations of calcium salt primarily calcium phosphate in the form of hydroxy apatite with small amounts of magnesium carbonate and ammonium. They form as a result of mineralization of debris that has accumulated in the lumen of the duct. These debris include bacterial colonies, exfoliated ductal epithelial cells, mucus plugs, foreign bodies or other cellular debris.[2] Wakely reported the distribution of sialoliths : 64% in submandibular gland and duct, 20 % in the parotid gland and duct and 16 % in the sublingual gland and duct. [3]

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Giant sialoliths are a rare finding in clinical oral pathology. The sialoliths of size 4.3 cm to 7 cm are shown in the table and all of them occurred in male patients. All 13 cases were in patients older than 42 years. Only one giant sialolith was found within the Stensen's duct of the parotid salivary gland while all others were in submandibular gland. [4]

CASE REPORT

A male patient aged 55 years reported to our clinic in Salem. He complained that he had recurrent episodes of pain and swelling in the neck, (Fig 1) over the last 4-5 years, with periods of remission. During these episodes, he had pain and difficulty in swallowing. The last episode occurred 2-3 months previous to the visit and the pain has been persistent till the time of reporting. On examination he had a diffuse swelling of 3x3cm size, over the right submandibular region. Intra orally there was a diffuse swelling and discharge of pus from the floor of the mouth on the

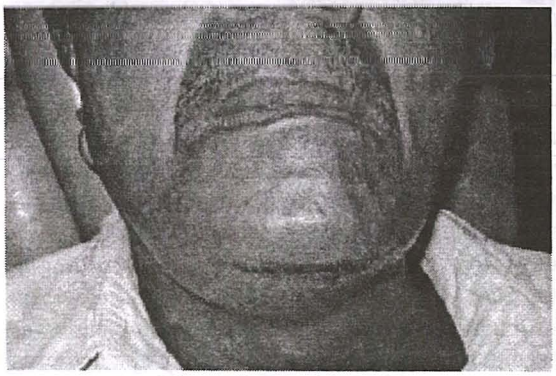


Fig. 1 Extra oral view

GIANT SIALOLITHS REPORTED IN THE LITERATURE[4]

Sl No:	Article	Gender	Age	Gland	Location	Size (mm)	Weight (g)
1.	Meyes, 1942	Male	50	SM	Duct	50	NR
2.	Mustard, 1945	Male	42	SM	Duct	56	NR
3.	Cavin and Santoli, 1965	Male	59	SM	Duct	70	18
4.	Cavin and Santoli, 1965	Male	53	SM	Duct	60	33
5.	Hoggins, 1968	Male	52	SM	Paren	50	NR
6.	Rust&Messerly, 1969	Male	66	PAR	Duct	51	NR
7.	Raksin et al, 1975	Male	52	SM	Duct	55	9.5
8.	Tinsley, 1989	Male	48	SM	Paren	50	23.5
9.	Hubar et al, 1990	Male	65	SM	Duct	52	17.5
10.	Akin & Esmer,1991	Male	45	SM	Paren	45	NR
11.	Paul & Chauhan, 1995	Male	45	SM	Duct	45	4.2
12.	Bodner, 2002	Male	50	SM	Duct	50	NR
13.	This Case	Male	52	SM	Duct	43	1.97

Abbreviations: SM, submandibular gland; PAR, parotid gland; Paren, parenchymal; NR, not reported.

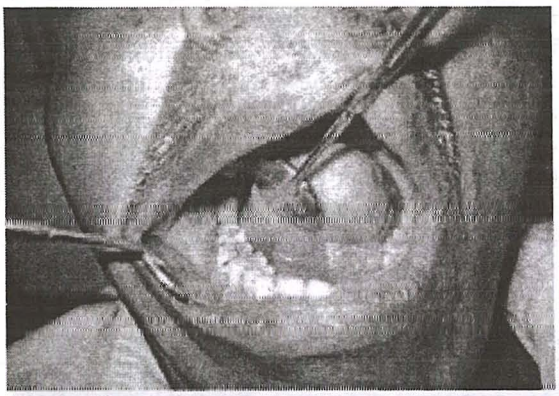


Fig. 2 Intra oral view

right side. (Fig 2) Submandibular duct opening was inflamed and erythematous. On bimanual palpation submandibular gland was firm and tender. A firm to hard swelling was palpated intraorally running from 1 cm posterior to the ductal opening to the base of the tongue posteriorly. Mild elevation of tongue was seen. No temperature increase was seen. A single tender submandibular lymph node was palpated.

The Orthopantomogram showed a radio opaque mass extending from the second premolar to distal of third molar. (Fig 3) Occlusal radiograph was not taken for this patient.

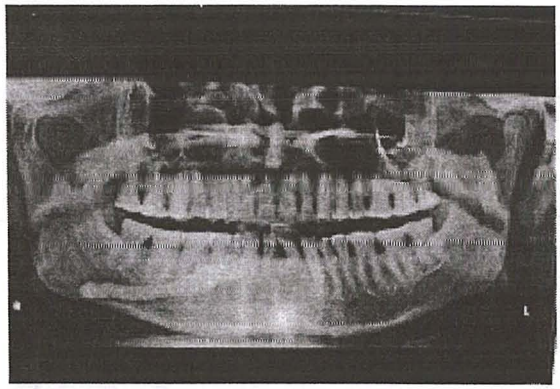


Fig. 3 Orthopantomogram

Under local anaesthesia, an intra oral incision was made in the floor of the mouth. The duct was opened and the sialolith was removed in 3 pieces. It was 4.3 cm in length and 9 mm in diameter in the bulkiest area. It weighed 1.966 g on an electronic

weighing machine. (Fig 4) The duct was sutured back into position.



Fig. 4 Sailolith gross specimen

SUMMARY AND CONCLUSION

Sialoliths should be always considered in submandibular and facial pain particularly when it is related to mealtime. A careful history and correct imaging techniques are required to confirm the clinical diagnosis and to define the precise location of the calcification. The differential diagnosis of a sialolith included a calcified lymph node, an avulsed or embedded tooth, a foreign body, a phlebolith and myositis ossicans[5]. If the stone is small, conservative management may be attempted with local heat, massage and sialogogues. Infection should be treated with antibiotics and these cases should be combined with simple sialolitho-tomy when required. Recent and alternative methods of treatment for small sialoliths include the use of extracorpo-real shock wave lithotripsy and the endoscopic intracorporeal shockwave lithotripsy.[1]

REFERENCES.

1. Royce J. Biddle, and Sandeep Arora, Giant Sialolith of the Submandibular Salivary Gland, Radiology Case Reports, Volume 3, Issue 2, 2008
2. Garry L Ellis, Paul L Auclair, Douglas R Pnepp Tumours of the Salivary Glands, Chapter 3, Page No 34-37, Volume 25 in the series Major Problems in pathology, W B Saunders Company.
3. William G Shafer, Maynard K Hine, Barnet M Levy,With contributions from Charles E Tomich, A Text book of Oral Pathology 4th Edition, Chapter 10, Page No 561-562, W B Saunders Company
4. Constantino Ledesma Montes, Maricela Garcés-Ortíz, Juan Francisco Salcido-García, Florentino Hernández-Flores and Juan Carlos Hernández-Guerrero ,Giant Sialolith: Case Report and Review of the Literature, J Oral Maxillofac Surg, 65:128-130, 2007
5. Gonsalves, E Hochuli-Vieira, CEB LugaÃo , MS Monnazzi1 and A GoncËalves, Sialolith of unusual size and shape Dentomaxillofacial Radiology (2002) 31, 209-210

Professor Wanjari appointed Dean of Dental Faculty DAVV Indore



Fellow Prof. P.V. Wanjari, Dean Modern Dental College & Research Centre, Indore has been appointed Dean of Faculty of Dentistry, Devi Ahilya Vishwavidyalaya, Indore vide his excellency The Governor of Madhya Pradesh No. F-17-16/R.S./4A-4/07/970 dated 10th June 2010 for a term of 2 years. Dr. Wanjari is an eminent academician in the subject of Oral Medicine & Radiology and competent and popular teacher in the subject.

He has a number of Scientific Publications in the Journals.

Heartiest Congratulations Dr. P.V. Wanjari.