SUBLINGUAL RANULA: CASE REPORT AND REVIEW OF LITERATURE
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Abstract:
A ranula can be defined as a mucous filled cavity, a mucocele located in the floor of the mouth with the sublingual gland. It resembles a frogs under belly/air sac, which is translucent. Based on clinical features they are of various types. This condition should be accurately diagnosed as it can mimic other potent pathologies. Advanced imaging like CT, MRI are also useful for diagnostic procedures. Surgery and medicine are the treatment options available, more commonly opted is the surgical treatment because with the medical treatment there are chances of recurrence. Through this paper we highlight a case on ranula in the floor of the mouth with a review of literature emphasizing the use of the advanced imaging diagnostic methods and updated medical line of treatment.

Key words: Ranula, Sublingual gland, pseudocyst

Introduction
Ranula was first described by Hippocrates.1 Formation of the ranula is due to rupture of the excretory duct which is followed by extravasation and salivary accumulation into the surrounding tissue which forms a pseudocyst that lacks epithelial lining.2,3 Clinically ranula is of three types. Most common of which is the "Sublingual ranula" which presents as an intraoral sublingual swelling. The second commonest is the “Plunging ranula” which is located cervically and extend beyond mylohyoid muscle, and those having both cervical and oral component is known as "sublingual plunging ranula".4 It has an unknown etiology but it may be seen in association with congenital anomalies, trauma, and disease of sublingual gland.5 The basic purpose of this article is to report a case of ranula and update the medical treatment for the same.

Case report
A 6 year old girl was brought to the out patients clinic of the Department of Oral Medicine & Radiology with a complaint of a growth in the floor of the mouth, since 1 month, that was interfering with mastication and speech. History further revealed that the growth was gradual on onset and progressive in size and was painless throughout its course. History of a similar growth but smaller in size when compared to the present growth, is also reported 6 months back which regressed on itself.

On clinical examination a bluish dome shaped swelling (Fig. 1) was seen on the left side of floor of mouth adjacent to 74, 75 measuring 2 x 2 cm in size which was soft in consistency, compressible, reducible and fluctuant. After correlating the history and clinical findings, case was provisionally diagnosed as “ranula”. The patient was referred for radiographic examination, which showed no signs of obstruction. After all clinical and preoperative evaluations excision of ranula along with the sublingual gland was done and patient follow up was done every week. The excised sample was sent for histopathological examination, which revealed predominance of histocytes in the cystic space and on the pseudocystic fibrous connective tissue wall and the walls composed of loose and vascularized connective tissue with the sublingual gland. (Fig. 2)
More often, due to location of the sublingual gland the ultrasonographic examination is inconclusive. Computed Tomography examination of a simple ranula reveals a cystic lesion which may be rough and ovoid in shape, with a central attenuation of 10 to 20 HU. The sublingual ranula is located above the mylohyoid muscle and just lateral to genioglossus muscle. Anteriorly, it may or may not extend behind the symphysis, above the genioglossus muscle and geniohyoid muscle. The most conclusive and sensitive examination for the sublingual salivary gland is magnetic resonance imaging (MRI), the appearance of which is dominated by its high water content. Thus, T1-weighted intermediate proton density is low and T2-weighted signal intensity high.\textsuperscript{13,14}

Histopathologically, ranula consists of a central cystic space, which contains mucin and a pseudocyst wall and is composed of loose and vascularized connective tissues. Predominantly there is presence of histocytes within the pseudocyst wall, which decrease in number over a period of time. There is absence of epithelial tissues in the wall of ranula. A histopathological examination of the cystic wall is mandatory, to rule out the presence of malignant carcinoma arising from the cyst wall and papillary cystadenocarcinoma of the sublingual gland, which may mimic ranula.\textsuperscript{15}

There are several different methods for the treatment of ranula. These include excision of the lesion via an intraoral or cervical approach, marsupialisation, intra oral excision of the sublingual gland and drainage and excision along with sublingual gland.

Garofalo S et al. in a study evaluated the effectiveness of orally administered Nickel Gluconate-Mercurius Heel-Potentised Swine Organ Preparations D10/D30/D200 for treatment of ranula without surgery. The mechanism of action of which is to stimulate pseudocyst reabsorption and glandular repair thus improving the physiologic functioning of the gland. They concluded that this is an effective treatment for ranula and oral mucoceles.\textsuperscript{16}

A study conducted by Fukase S. et al. showed a disappearance or marked reduction in ranula size with injection of OK-432. In their study only half of the patients experienced local pain or fever which resolved within several days. Intracystic injection therapy with OK-432 is relatively safe and can be used as a substitute for surgery in the treatment of ranula.\textsuperscript{17}

Sialoendoscopy holds a promising future as a new and better method for diagnosis, treatment and postoperative management of sialolithiasis, sialolithiasis and other obstructive salivary gland diseases.\textsuperscript{18}
CONCLUSION

Accurate diagnosis is important for the effective treatment of ranula. With the introduction of advanced imaging techniques like CT and MRI, helps the clinicians in making proper diagnosis and treatment planning. During surgery there is threat of injury to the lingual nerve thus surgical approach should be prevented and the latest medical management techniques should be advocated.

REFERENCES
