SUMMARY AND CONCLUSION

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Salivary calculi commonly affect the submandibular gland (80-90%) because of the viscous consistency and mineral content of its saliva and the long, irregular length of its duct. In contrast, the parotid gland is only occasionally involved (5-20%). The sublingul gland and the minor salivary glands are rarely affected. Sialolithiasis may occur at all ages, but usually over the age of fourty, with male predilection; one gland involvement is the rule,

The size of the sialolith varies from a small grain to gaint sialolith, 2-3 cm in diameter. Sialolith may be round, oval or elongated with smooth or knobby surface; in most calculi the internal structure is laminated. The stones may be solitary or multiple. The main inorganic components of the stones are calcium, phosphate, carbonate and oxalate. The possible etiology for stone formation is calcification around foreign bodies, desquamated epithelial cells and microorganisms in the duct.

The patient with a salivary stone is generally asymptomatic until the stone attains such a size that it interferes with the normal egress of saliva. The main symptoms of salivary calculi are swelling and pain because of obstruction and / or infection, pain related to mastication is a characteristic symptom.

Diagnosis of sialolithiasis by history of intermittent attacks of moderate to severe pain and swelling related to eating. Physical examination of the salivary gland by inspecting the face for asymmetry, palpating the gland for elargement and consistency, milking the gland to inspect the amount of salivary flow, palpating the ductal area for rock - hard nodules.

Plain x ray films are essential and one of the most important radiological investigations in diagnosis. 80% of the submandibular calculi and 60% of the parotid calculi are radiopaque and can be detected on plain films.

Radiolucent calculi may be distinguished by sialography. By this means radiolucent obstruction and dilatation and narrowing of the duct may be showen.

The submandibular calculi are radiopaque and often exhibit a posterior acoustic shadow on its ultrasonic pattern. By contrast, parotid stones are frequently intraglandular and surrounded by a hypoechogenic halo on sonograms.

The introduction of CT and then MR imaging has resulted in numerous applications of these imaging methods to head and neak surgery. MR imaging has superior sensitivity in detecting small lesions; CT scan, however is superior to MR imaging in delineating calcified lesions.

A salivary stone should always be removed. In many cases excision of the entire gland is required to prevent multiple, recurrent episodes. Removal of submandibular calculi which lie in the distal portion of the duct, and stones in extraglandular part of stenson's duct up to the accessory parotid gland can be reached by intra-oral approach.

Submandibular calculi that lie in the proximal portion of the duct and stones in gland itself are usually managed by sialadenectomy. The stones proximal to accessory parotid gland and stones within the gland removed by extra-oral sialolithotomy.

Recent methods for treatment of salivary stones were reported by many authors, as, the non-operative removal of duct stones with a balloon angioplasty catheter. The procedure requires neither general nor local anaesthesia, nor a surgical incision of the papilla or duct. Removal of parotid duct stone by a Dormia basket is performed under general anaesthesia.

In recent years much research has been devoted to developing less invasive alternatives to conventional surgery. So, small intraductal salivary stones (3 mm or less) can be treated using carbon dioxide laser as surgical dissector.

The piezoelectric shock - wave principle was introduced in 1986. Its application under sonographic control is painless. The focus area is very small, therefore, this system can be adapted to the treatment of the head and neck area. No anaesthesia is necessary in any case. No adjuvant treatment is required and no serious complications are observed. Removal of a stone in stensen's duct with endoscopic laser lithotripsy was reported.

Endoscopy as a new technique for diagnosis and treatment of salivary stones has also been reported. This procedure offers the advantages of exploration of the salivary ducts and the removal of calculi with minimal damage to the surrounding tissue. The procedure is done on an outpatient basis under local anaesthesia and with low morbidity.