



Unusually large submandibular gland stone

Olağan dışı büyük tükürük bezi taşı

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ABSTRACT

Submandibular gland calculi is the most common disease of the gland. In this article, we report a case with unusually large stone located at the hilum of the gland causing necrosis of the overlying duct and the oral mucosa (floor of mouth).

Keywords: Salivary gland; submandibular; stone.

ÖZ

Tükürük bezi taşı, bezin en sık görülen hastalığıdır. Bu yazıda, bezin hilyum yerleşimli olup altta yatan kanalda ve ağız mukozasında (ağız tabanı) nekroza yol açan olağan dışı büyük taşı olan bir olgu sunuldu.

Anahtar Sözcükler: Tükürük bezi; submandibüler; taş.

Sialolithiasis is the most common disease of salivary glands, and affects about 12:1,000 of the adult population^[1] usually above the age of 40 years with children rarely affected.^[2] Males are affected twice as females.^[3] The majority affect the submandibular gland (80%) followed by the parotid glands, sublingual glands and minor salivary glands.^[4] Fewer than 3% of cases involve bilateral or multiple gland stones,^[5] and the left and right sides are equally affected. Sialoliths tend to occupy different positions along the salivary duct or gland and the submandibular stones close to the gland hilum tend to become larger before becoming symptomatic. Stones commonly measure from 1-10 mm, and those larger than 15 mm (giant stones) are rarely reported while those measuring over 30 mm are extremely rare and scantily reported.^[6-8]

The stones are yellowish, round or ovoid with rough or smooth surface consisting mainly from calcium phosphate, hydroxyapatite, magnesium, potassium and ammonia.^[9]

CASE REPORT

A 21-year-old man was referred to the ORL, Head and Neck Surgery Department at Al-Habbobi General Hospital in Annasiriya-south of Iraq in June 2012 complaining of recurrent painful swelling in the left submandibular area. He had an unremarkable past medical and surgical history.

Examination (bimanual palpation) revealed a large firm, mobile, non-tender mass in the left submandibular area corresponding to the anatomic site of the gland hilum. Under local anesthesia (spray and infiltration) and sedation,





Figure 1. Measurement of the stone.

examination of the patient revealed a large submandibular stone (about 28 mm) impacted at the gland hilum causing necrosis of the mucosa of the floor of the mouth at that site (site of the junction of the duct and the deep lobe). It was mobilized and extracted intraorally and the patient was discharged on the same day with instructions regarding oral hygiene and simple analgesia. The extracted calculus was irregularly-shaped, yellowish with rough surface. The patient was reviewed two weeks later to check salivary function and on clear saliva was expressed from the duct on massage.

DISCUSSION

The submandibular gland has the majority of salivary calculi and this is thought to be due to the direction of salivary flow (against gravity), long tortuous duct course, more alkaline PH and high calcium and mucin content, but the exact etiology and pathogenesis are unknown.^[10] Large sialoliths have been reported both in the glands and ducts, but those larger than 30 mm are rare.^[11-13] Giant stones were reported by Ledesman-Montes et al.^[8] with 16 cases of stones larger than 35 mm. The submandibular stones are removed surgically either intra-orally or externally and this primarily depends on the stone location.^[14,15] Newer modalities for removal have been developed such as shock wave lithotripsy, basket extraction and endoscopic LASER lithotripsy.^[16,17]

Conclusion

Large submandibular gland stones rarely occur due to early diagnosis and treatment.

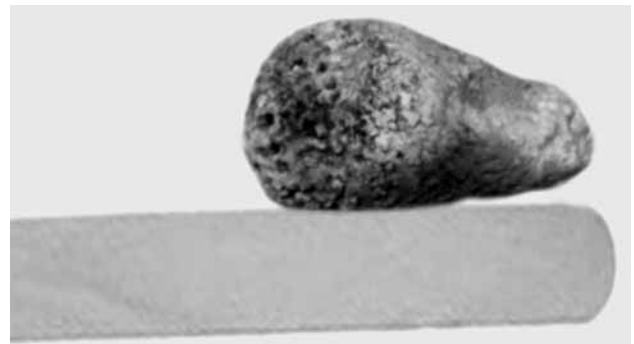


Figure 2. Stone in compare to wooden tongue depressor.

Cases like ours can be avoided by educating patients about the importance of hydration and oral hygiene and prompt removal following diagnosis.

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