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The case of the submandibular gland sialolith

Salivary calculi (sialoliths) are formed most often in the submandibular gland and in the excretory duct, rarely in the sublingual and parotid gland. Chronic sialadenitis and retention of saliva are associated with this process. It leads to precipitation of mineral salts around exfoliated epithelium, bacteria, condensed mucus and formation of sialoliths of different size and shape. Salivary calculi gradually increase the mass, close the gland duct and cause disorders of sialorrhea (1,4).

The clinical symptoms indicated for the present sialolith in the submandibular gland are: the increase of the gland, bulging of oral mucosa, the presence of pus secretion in the ostium of the excretory duct. Other characteristic symptoms are sharp pain and sudden increasing of submandibular gland during eating. These signs are connected with the retention of saliva (2, 6, 7).

We can diagnose sialolithiasis in the course of a two-handed palpable examination of oral cavity bottom, probing of excretory duct on the sublingual caruncle. X-ray examinations are also useful: occlusal and oblique-lateral of the mandible. The dilatation of gland duct and changes in gland are clearly visible in the sialograms (3, 5). When the sialolith is in the gland duct, intraoral surgery treatment is recommended, after the sagittal cutting of the duct. Sometimes the relapses of sialolithiasis happen and then extirpation of all submandibular gland with sialolith may be necessary (8).

In this article there is described a case of a sialolith formation in the submandibular gland duct during 2 years.

CASE DESCRIPTION

A patient Z.H., aged 45 years (No of case record 111/7221/94) was coming to outpatient clinic of the Department of Dental and Maxillofacial Surgery in Lublin because of swelling of the oral cavity bottom and salivary submandibular gland, which recurred. He also complained of acute pain during and after meals. He noticed a bulge two years earlier and he tried to treat it using home non-pharmacological means. Because the treatment was not effective and the gland increased and thickened, he decided to seek some advice at the maxillofacial surgeon.

Using clinical examination we found a hard, painful, oval formation under the tongue, on the left, in the place of the submandibular gland. After palpable examination pus content of the duct was evaluated. The X-ray examination (occlusal, oblique-lateral of the mandible and panoramic) showed well saturated, longitudinal shadow in the region of the teeth 33-35. It was indicated on calcium concrement in submandibular duct (Fig.1 and 2). On the basis of the clinical examination, probing of

the gland duct and roentgenograms sialolithiasis of submandibular gland was diagnosed.

Intraoral surgical intervention was made in local anesthesia using 2 % Lignocain with noradrenaline. The bulge was cut in the oral cavity bottom, along the gland excretory duct and sialolith of the size of 250 mm x 10 mm was removed (Fig. 3 and 4). The thick saliva and pus were also evacuated. A rubber drain was inserted into the postoperative wound, and it was removed after 24 hours. The patient was given sialogogue drugs. The edges of the wound healed spontaneously and regression of the symptoms described by the patient took place within a few days.

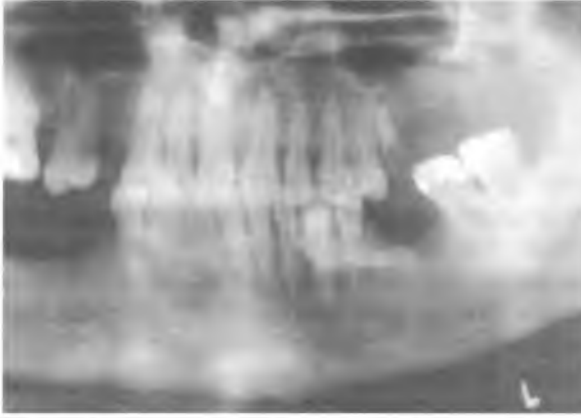


Fig.1. X-ray panoramic of the mandible localization of the sialolith



Fig. 2. X-ray occlusal with the visible sialolith



Fig. 3. Intraoperative photograph with the sialolith of the submandibular gland (the patient Z.H)



Fig. 4. Sialolith of the size of 250 mm x 10 mm removed from the left submandibular gland excretory duct

DISCUSSION

Difficulties in secreting of saliva and its retention because of sialolith cause inflammation of the submandibular gland. In the beginning stagnation and accumulation of saliva dilate gland duct and subsequently press its parenchyma. This state can persist for many years, but it leads to retention of concrement and fibrosis of the gland. At first the process advances without any symptoms but if the gland increases and causes severe pain, particularly just before, during and after meals, the patient is anxious. Therefore it is necessary to remove the whole gland with sialolith.

Diagnosis of sialolithiasis of the submandibular gland is rather easy, but sometimes the clinical picture resembles the abscess of the oral cavity bottom, retention cyst, mixed tumour, neoplasm. On

the roentgenograms sialolith can resemble calcified submandibular lymph nodes, phleboliths, teeth roots, and odontomas (4).

The sialolith may be round, ovoid or elongated. It may be just a few millimeter or 2 cm long or more. Sialoliths are usually yellow. Two-handed palpable examination, probing of gland duct, X-ray examination and observation of the ostium of the gland duct are necessary to make a good diagnosis. Small calculi may sometimes be removed by manipulation. The larger stones almost always require surgical exposure for removal.

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SUMMARY

The authors describe a case of a sialolith formation in a submandibular gland over 2 years. A large salivary stone is demonstrated radiologically and surgical treatment is described.

Przypadek kamicy ślinianki podżuchwowej

Autorzy opisują przypadek tworzącego się w ciągu 2 lat kamienia ślinowego w śliniance podżuchwowej. Dużych rozmiarów kamień ślinowy przedstawiony jest na radiogramach wraz z opisem postępowania leczniczego.