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Rodrigues, Gustavo Henrique Campos; Carvalho, Vanessa
Juliana Gomes; Alves, Fabio Abreu; Domaneschi, Carina

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Autopsy Case Reports

Letter to the Editor

Giant submandibular sialolith conservatively treated

Gustavo Henrique Campos Rodrigues[a], Vanessa Juliana Gomes Carvalho[a], Fabio Abreu Alves[a], Carina Domaneschi[a]

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Dear Editor,

Sialolithiasis is the most common non-neoplastic disease of the salivary glands, which is characterized by the development of sialoliths inside these glands, particularly in the submandibular gland. It is estimated that 12 of every 1,000 adult patients present sialolithiasis. Diagnosis is not challenging. Symptoms comprise local swelling, signs of infection, and pain–although the latter may be absent in 17% of the cases.[1] Perforation of the mouth floor by a giant sialolith is extremely rare.[2]

It is believed that the physiopathology of sialoliths comprises the deposition of minerals around a niche of bacteria, mucus, or desquamated cells; increased calcium concentration and alkalinity in the saliva; and infection, inflammation, or trauma of the salivary gland or its duct. The submandibular glands are more likely to form calculus because their saliva is more alkaline and has a higher concentration of calcium and phosphate.[3,4] Approximately 80-90% of all cases of sialolithiasis occur in the submandibular glands.[5] The size of sialoliths ranges from less than 1 mm to a few centimeters and most of the calculi (88%) are less than 10 mm in size.[6,7] However, giant sialoliths (>15 mm) in the submandibular duct have rarely been reported and may reach from 35 mm to 70 mm.[2,3,8]

The etiology of submandibular gland's sialoliths is not well established,[3] and males are affected twice as much as females.[9] These cases are associated with long and large gauge ducts, slow salivary flow, alkaline pH of the saliva, high mucin concentration, and a high rate of calcium.[3]

Sialolithiasis is often accompanied by recurrent episodes of pain and swelling in the involved salivary gland. Patients often look for medical care later rather than sooner, when the calculus has already become large. Episodes of local pain and swelling are usually associated with eating.[10] Interestingly, our patient has never presented pain associated with the left submandibular region swelling, which may have permitted the development of such a large sialolith.

The aim of the treatment of giant sialoliths is to restore the normal salivary secretion, which generally requires a minimally invasive intraoral sialotomia.[11]

We describe the case of a 48-year-old female patient that looked for the Stomatology Outpatient Clinic complaining of a painless mass in the neck over the last 3 years. She denied any other comorbidity. On intra- and extra-oral examination, a hard, painless, and mobile nodule was palpable in the region of the left submandibular gland. Radiographically, an extensive radiolucent area with defined limits was observed in the area of the left submandibular gland consistent with the diagnosis of sialolith (Figure 1A).

Surprisingly, during examination of the submandibular gland, a calculus of 45 mm was exteriorized from an epithelialized fouling site, and

[a] Stomatology Department - School of Dentistry - University of São Paulo, São Paulo/SP – Brazil.

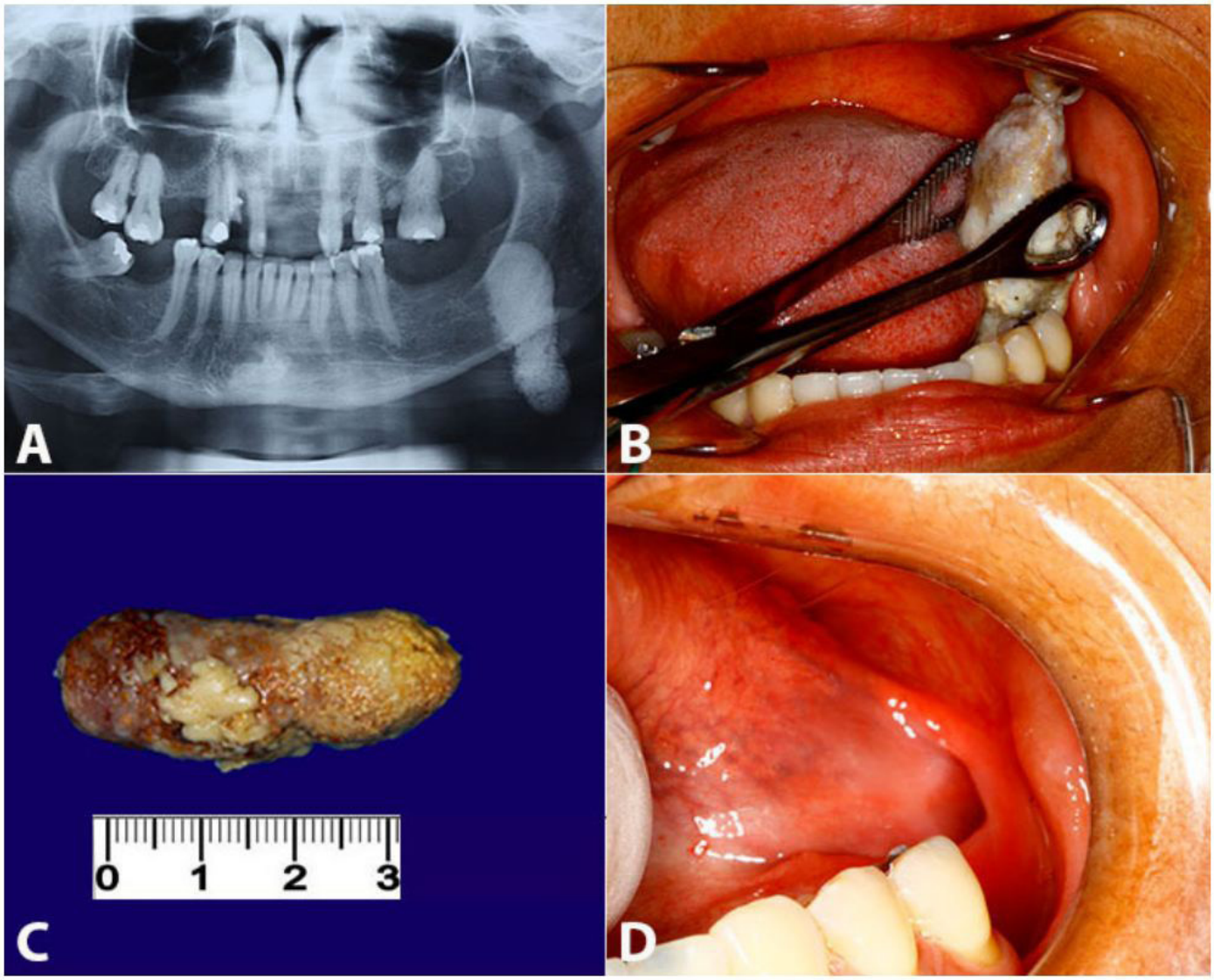

Figure 1. A - Panoramic radiography showing a large opacity in the topography of the left submandibular gland; **B** - Removal of the sialolith conservatively; **C** - Gross examination of the sialolith; **D** - Healing appearance of the mouth floor.

was easily removed without anesthesia or surgical excision (Figure 1B and 1C). The first month follow-up consultation showed a healed area (Figure 1D) and a normal submandibular gland. The patient was symptomless.

The scant reports on giant sialoliths usually describe irreversible functional damage to the salivary glands following the resection. The viability of the conservative approach in this case was due to the fact that the sialolith had already broken up the epithelium, and was expelled by manually pressing the posterior portion of the gland towards the external ductal drainage. The spontaneous expulsion did not occur during the patient's masticatory movements because of the sialolith's position, which was posterior within the submandibular duct, and added to the fear of the patient in self-manipulating "that strange nodule".

This case report draws attention to the feasibility of a harmless conservative therapeutic approach to such a huge sialolith. No submandibular function impairment remained after the therapy.

Keywords
Salivary Gland Calculi; Diagnosis; Treatment

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Correspondence
Carina Domaneschi
Stomatology Department - School of Dentistry - University of São Paulo (USP)
Avenida Prof. Lineu Prestes, 2227 – Cidade Universitária – São Paulo/SP – Brazil
CEP: 05508-000
Phone +55 (11) 3091-7893
Fax +55 (11) 3091-7820
domaneschi@usp.br