

Giant Submandibular Sialolith (Megalith): A Rare Case Report

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ABSTRACT

Background: Submandibular sialolithiasis is the most common salivary gland disorder. Giant sialoliths, also termed megaliths, are rare and pose diagnostic and surgical challenges, particularly in elderly or medically compromised patients.

Case Presentation: A 76-year-old male presented with a massive right submandibular duct sialolith measuring $5.5 \times 3 \times 2.5$ cm and weighing 32 g. The patient had multiple comorbidities including atrial fibrillation, pulmonary hypertension, chronic obstructive pulmonary disease, and dementia. Due to high anaesthetic risk, the stone was successfully removed through an intraoral approach under local anaesthesia.

Conclusion: This case highlights that even very large submandibular megaliths can be safely and effectively managed via an intraoral approach under local anaesthesia in carefully selected high-risk patients.

Keywords: Submandibular gland; Sialolithiasis; Megalith; Intraoral Excision; Case Report

*See End Note for complete author details

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INTRODUCTION

Sialolithiasis accounts for approximately 80–90% of salivary gland calculi, with the submandibular gland being most commonly affected due to its long duct, upward course, and calcium-rich, viscous saliva.^{1,2} Most sialoliths are small; however, rarely, unusually large calculi exceeding 15 mm develop and are termed megaliths.^{3,4} These may remain asymptomatic for long periods and present late with ductal obstruction, infection, or rupture.⁵ Management depends on stone size, location, and patient-related factors, with minimally invasive approaches preferred whenever feasible.⁶

CASE REPORT

A 76 year old male patient presented to Bishop Benziger Hospital, Kollam in October 2025 with



Figure 1: Pre-operative intraoral view showing yellowish sialolith in the right floor of mouth



Figure 2: Post-operative intraoral view showing healed ductal opening.

a painless swelling and feeling of heaviness in his right submandibular region since 6 months. The increase in size of the swelling was gradual and the patient had no difficulties with mastication or swallowing. The patient had complaints of excessive salivation. On examination, a mass was felt in the right submandibular region, measuring about 6 x 4 cm, (**Figure 1**) hard in consistency and appeared to be fixed to surrounding tissues. On intra oral examination, there was a pale yellow mass seen in the floor of the mouth on the right side, strongly adherent to surrounding tissue. On bimanual palpation, pus was seen extruding from posterior aspect of the floor of mouth on the right side suggesting that the duct had ruptured due to the mass obstructing it. The submandibular gland was palpated and found to be enlarged but non tender. The mass was found to be mobile in bimanual palpation which suggested that it was free of any attachment to surrounding bony tissue like the mandible. Based on the clinical findings a

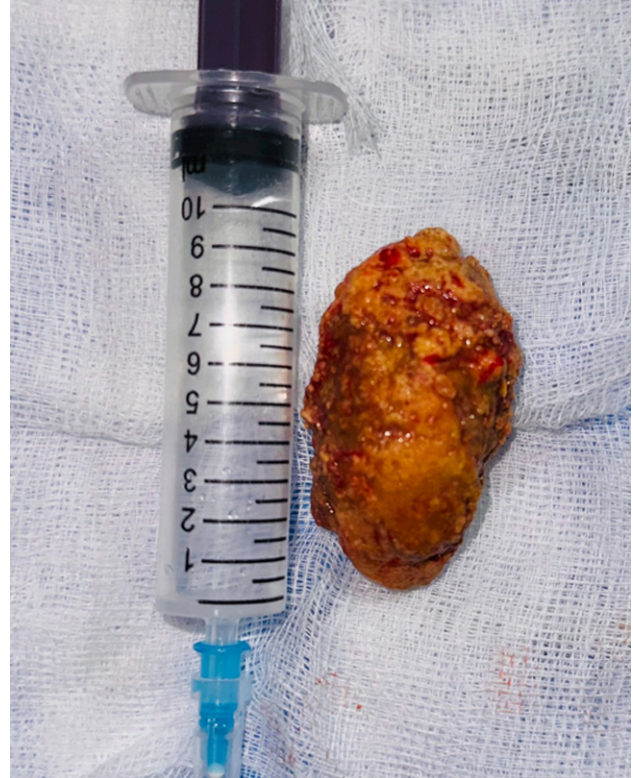


Figure 3: Excised giant submandibular sialolith placed adjacent to a 10-cc syringe for size comparison.

diagnosis of right submandibular duct sialolith was made and surgical removal was planned. On general physical examination, the patient weighs 115 kg and has a height of 182 cm. His BMI is 34.7 (Obese class I) as per WHO classification. His pulse is irregular as he is having atrial fibrillation. He is on undergoing treatment for Hypertension, COPD and dementia. His cardiac evaluation revealed grossly dilated left atrium, moderate to severe pulmonary artery hypertension and atrial fibrillation. Based on these parameters, a joint discussion between the operating surgeon, anaesthetist and the patient resulted in deciding to take up the patient on local anaesthesia and the surgical route preferred was exclusively intraoral. The patient was shifted to the operating table, positioned in the sitting position. Local anaesthesia was given using 10% Lidocaine spray to the floor of mouth and infiltration done to the base of the sialolith was done with 2% Lignocaine in order to facilitate easier dissection of the base. The surface mucosa over the sialolith was incised intraorally and an elevator probe was used to painstakingly dissect the mucosa of surrounding adherent tissue. Pressure was provided from the submandibular region of the neck so as to keep the sialolith in view for easier manipulation.

The base was found to be wide and highly adherent. The sialolith in its entirety was removed without any major damage to surrounding structures. Hemostasis was achieved by using bipolar cautery (**Figure 2**). The resulting cavity was filled with a steroid soaked gauze for 24 hours post excision to avoid any stenosis. On follow up the duct is found to be patent and patient is not having any difficulties. The sialolith was found to measure 5.5 x 3 x 2.5 cms and weighing 32 gms which qualifies it to be called as a Megalith (**Figure 3**).

DISCUSSION

Giant submandibular sialoliths are rare entities.^{1,3} Large stones may cause ductal obstruction, secondary infection, or spontaneous ductal rupture.^{4,5} Imaging aids diagnosis, but in many cases clinical examination is sufficient.² Treatment selection depends on stone size, location, and patient comorbidities. In medically compromised patients, intraoral excision under local anaesthesia offers a safe alternative to surgery under general anaesthesia while preserving gland function.⁶

CONCLUSION

Submandibular megaliths, though rare, can be successfully managed using a minimally invasive intraoral approach. Careful patient selection allows safe removal under local anaesthesia with excellent functional outcomes, even in high-risk individuals.

END NOTE

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