

# Bilateral Parotid Duct Stones: A Case Report

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## ABSTRACT

Sialolithiasis predominantly affects major salivary glands with an incidence rate of 5.9 cases per 100,000 people yearly in the United Kingdom. Sialolithiasis is common in individuals aged between 30-60 years with higher prevalence in males. Among these, 80-90% of cases occur in the submandibular, 6-15% in the parotid, and 2% in the sublingual ducts or glands. Only 3-5% of cases occur in the minor salivary glands. Most parotid stones occur unilaterally involving either the right or left duct or gland parenchyma. However, bilateral parotid duct stones are an exceedingly rare condition. This article reports a unique case of a healthy adult male diagnosed as a case of bilateral parotid duct stones.

**Key Words:** Parotid duct stones, Salivary duct obstruction, Sialolithiasis.

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## INTRODUCTION

Parotid glands are the largest of the major salivary glands secreting serous saliva which facilitates mastication and swallowing and initiates the digestion of starches in the mouth.<sup>1,2</sup> Although the aetiology of sialolithiasis is unknown, it can occur in any salivary gland or its duct and possible factors reported in studies include dehydration, poor diet particularly low fluid intake or high levels of calcium in the diet, anti-sialogogue medications, infections, and trauma to duct or gland. Comorbidities that help accelerate the formation of stones such as Sjogren syndrome (SS), diabetes mellitus, etc. can potentially lead to sialolithiasis and such cases have been reported.<sup>3</sup> Salivary stones are composed of a mineralised centre as a nidus which progressively deposits layers of organic and inorganic substances in layers increasing their size with time. Bilateral parotid duct stones are an extremely rare diagnosis in clinical practice. Here, we present a case of bilateral parotid duct stones in a patient having no salivary gland disease.

## CASE REPORT

A 60-year male smoker, diabetic and hypertensive, presented with a history of pain and swelling on the left side of the buccal cavity for one week. The patient was in his usual state of health 2 months ago when he first time noticed intermittent pain in his left cheek, particularly during meals. The pain was associated with mild-to-moderate swelling over the cheek which disappeared on its own a few hours after mealtime.

A few days before reporting to OPD, he developed severe persistent pain and swelling on the left cheek and in the left side of the oral cavity associated with low-grade fever. The patient denied any pain or difficulty in swallowing liquids or solids. The patient had no history of trauma, dryness of mouth, dental and gum infection or discharge from the swelling on the face or inside the oral cavity. There was no history of facial weakness. There were no similar complaints for the right side of the mouth or face. The patient had 40 pack-year history of smoking. No other addictions were reported. His appetite was normal. Bowel habits and sleep were also normal. Past medical, surgical, and family history were insignificant.

General physical examination was normal. Oral cavity examination revealed redness and moderate tenderness in the left buccal cavity. A pea-sized hard mass, slightly movable, palpable under buccal mucosa in the left-upper gingivobuccal sulcus opposite 2<sup>nd</sup> molar tooth was noted. On pressing the parotid gland, frank purulent discharge was noted from the duct. Right-sided oral cavity examination also revealed a pea-sized hard mass palpable under buccal mucosa in the right upper gingivobuccal sulcus opposite 2<sup>nd</sup> molar tooth, with mild redness of mucosa and mild tenderness. The neck examination was normal. Cervical lymph nodes were not palpable.

CT scan revealed bilateral hyperdense structures at parotid duct levels on both sides (Figure 1). Based on the findings of clinical examination and CT, bilateral parotid duct stones were diagnosed.

Surgical exploration under general anaesthesia was performed. A stone measuring about 10 mm in length and 3 mm in width was retrieved from the left side. On the right side, stone of about 10 mm in length and 8 mm in width was retrieved from the right parotid duct (Figure 2). The sites of the incision were left open to heal naturally without closure.

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**AUTHORS' CONTRIBUTION:**

AA: Manuscript writing.

AHS: Concept, design, and analysis.

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