

Ludwig's angina

Sir, a 25-year-old male attended a Tier 2 primary care MOS service referred for extraction of the 36 molar under IV sedation. The referral stated the patient was suffering pain and had had multiple courses of antibiotics for repeated swellings. There was nothing of clinical importance in the medical history. A periapical radiograph was included (Fig. 1).

A large swelling was visible under his chin and he reported a three-day history of worsening swelling with increased pain and difficulty swallowing. Examination revealed a bilateral submental and submandibular enlargement which was firm, tender and warm to touch. Mouth opening was limited to less than one finger. A degree of hoarseness was noted in the voice but he was able to complete full sentences. Baseline observations were unremarkable. Due to the presence of red-flag signs a provisional diagnosis of Ludwig's angina was reached and a prompt referral to the local OMFS unit arranged. The patient was blue-lighted to resuscitation. He underwent emergency surgery involving incision and drainage with extraction of the infected 36 under GA. Post-operatively he remained in hospital for several days due to significant swelling and active extra-oral drains. Fortunately, escalation to intensive care was avoided.

True Ludwig's angina is uncommon. It is named after German physician Karl Friedrich Wilhelm von Ludwig, who first described it in 1836. The word angina is derived from the Latin word for choke (*angere*).¹ Sepsis is not uncommon with large swellings caused by a nidus of infection and can quickly result in multiple organ failure especially in those



Fig. 1 Pre-operative periapical radiograph of the lower left first molar included in referral. Deep secondary caries and associated periapical pathology noted

with underlying health conditions that cause immunosuppression such as diabetes. This case serves to remind clinicians of the signs and symptoms when assessing and managing dental abscesses. It is crucial to consider these signs and symptoms especially in this COVID-19 pandemic where remote consultations and prescribing have become more commonplace. Providing a safety net for patients will reduce the risk of serious complications and this can be done by discussing the red flags and the actions to take:

- Significant trismus
- Bilateral submental and submandibular swelling
- Muffled (hot potato) voice
- Fever
- Firm/raised floor of mouth
- Limited/altered tongue mobility
- Difficulty swallowing or drooling.

These signs can indicate a significantly worsening swelling requiring emergency management.

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Reference

1. Costain N, Marrie T J. Ludwig's angina. *Am J Med* 2011; **124**: 115-117.
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Foreign body retrieval

Sir, a 38-year-old gentleman presented to A&E with a right sided focal fluctuant swelling to the submandibular and submental area which crossed the midline. The neck was diffusely swollen. He had dysphonia, odynophagia and dyspnoea. He was tachycardic and tachypnoeic and gave a history of intermittent dental abscess from the lower right quadrant further to a dental extraction many years ago. On previous occasions this had usually resolved

with courses of antibiotics. Medically the patient had a history of recreational drug use and was a heavy smoker. A provisional diagnosis of impending airway loss secondary to spreading dental sepsis from the 46 region was made.

Routine blood showed raised WBC (21.2), neutrophils (19.7), CRP (456), lactate (2.1), and urea 8.3 mmol/L, demonstrating significant cervico-facial infection. An OPG revealed a foreign body (FB) in the 46 region (Fig. 1). Urgent theatre arrangements were made in order to stabilise the airway and achieve immediate abscess drainage and attempt foreign body removal. The abscess was drained via an extraoral and intraoral approach. The FB was not retrievable with blunt dissection.



Fig. 1 Orthopantomogram showing a radiopaque foreign body in the 46 region

Post-operatively, a CT scan was carried out to locate the FB with plans for elective retrieval. With the patient's airway now safe, on questioning, he admitted attempting to clear the lower right molar socket of debris with an interdental brush and we hypothesised the FB to be its metallic core. Whilst the patient initially improved, worsening clinical signs and neck swelling necessitated a repeat CT. This demonstrated a spreading fascial space infection with further collections extending to the right anterior neck, retrosternal and antero-superior mediastinum. The position of the FB remained unchanged.



Fig. 2 Interdental brush retrieved measuring 15 mm