Tara Renton and Nairn H F Wilson

Problems with erupting wisdom teeth:

signs, symptoms, and management

Tara Renton, PhD, FRACDS(OMS), professor of oral surgery; **Nairn HF Wilson**, PhD, MSc, FDS, FFGDP, FFD, DRD, professor of dentistry, King's College London Dental Institute, King's College London, London, UK.

Address for correspondence

King's College London Dental Institute, King's College London,Denmark Hill, London SE5 9RS, UK.

E-mail: nairn.wilson@btinternet.com

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INTRODUCTION

Many patients, in particular those with a fear of dentistry, or fear of the possible cost of dental treatment, consult their GP when they develop a dental problem, in particular dental pain.[1] A very common cause of dental pain is erupting wisdom teeth. This article presents and describes the management of painful and infected erupting wisdom teeth.

WISDOM TEETH

Wisdom teeth or third molars (M3s) are the last, most posteriorly placed permanent teeth to erupt. They usually erupt into the mouth between 17 and 25 years of age. They can, however, erupt many years later. Most adults have four M3s; however, 8% of the UK population have missing or no M3s.[2] Mandibular M3s often get impacted in a partially erupted, non-functional position (Figure 1). Eighty per cent of M3s require extraction before 70 years of age. National Institute for Health and Care Excellence (NICE) guidance has discouraged interceptive extraction resulting in later morbidity in many patients.[3]

PERICORONITIS

Pericoronitis — inflammation and infection of the soft tissues around a partially erupted tooth (Figure 2) — is often associated with impacted M3s. Other associated conditions include dental caries (Figure 1), resorption of the roots of the adjacent tooth (Figure 1), and rarely cyst formation and tumours.

The prevalence of pericoronitis is reported to be 81% in the 20–29 year age group. The general health of the patient is not a predisposing factor, other than upper respiratory tract infection, which precedes the occurrence of pericoronitis in 43% of cases. Several studies have shown that the microflora of pericoronitis is predominantly anaerobic, including streptococci, *Actinomyces*, and *Propionibacterium*.[2]

MANAGEMENT OF PERICORONITIS TYPES

Acute pericoronitis is usually a single event of relatively short duration (3–4 days) associated with normal eruption. Improved local oral hygiene by toothbrushing with toothpaste, interdental cleaning, or the use of a chlorhexidine-containing mouthwash can reverse the symptoms. Paracetamol or ibuprofen may be prescribed to relieve the pain. Analgesic tablets should always be swallowed. Under no circumstances should analgesic tablets be placed adjacent to the pericoronitis; a relatively common, ill-informed mistake by patients. If the pain persists for more than 3–4 days, or intensifies, a dentist should be consulted. If the symptoms persist extraction of the tooth is recommended.[2]

Acute spreading pericoronitis is an acute spreading infection, often stemming from a recurrence of acute pericoronitis. Surgical removal of the erupting M3 is preferred to the prescription of antibiotics. Antibiotics should only be prescribed when immediate surgical removal is impossible; for example, when there is associated trismus, or systemic infection with lymphadenopathy and pyrexia, possibly requiring hospitalisation. When antibiotics are indicated, Faculty of General Dental Practice (UK) guidance for pericoronitis recommends metronadizole 200 mg TDS for 3 days plus tooth removal.[3] Spread of infection into local tissue spaces (Figure 3a and 3b) can cause significant morbidity. Such spread of infection, in particular if it involves the upper respiratory tract, requires referral for immediate care.

Chronic recurrent pericoronitis presents with relatively mild episodes of recurrent infection and pain associated with an erupting M3. The preferred treatment is early extraction of the M3, rather than the prescription of analgesics, let alone antibiotics.[4] Improved oral hygiene and the use of an antimicrobial mouthwash are at best palliative.

Failure to treat chronic recurrent pericoronitis by means of extraction may lead to dental caries and possible subsequent abscess formation in the adjacent second molar tooth (M2) (Figure 1). This situation

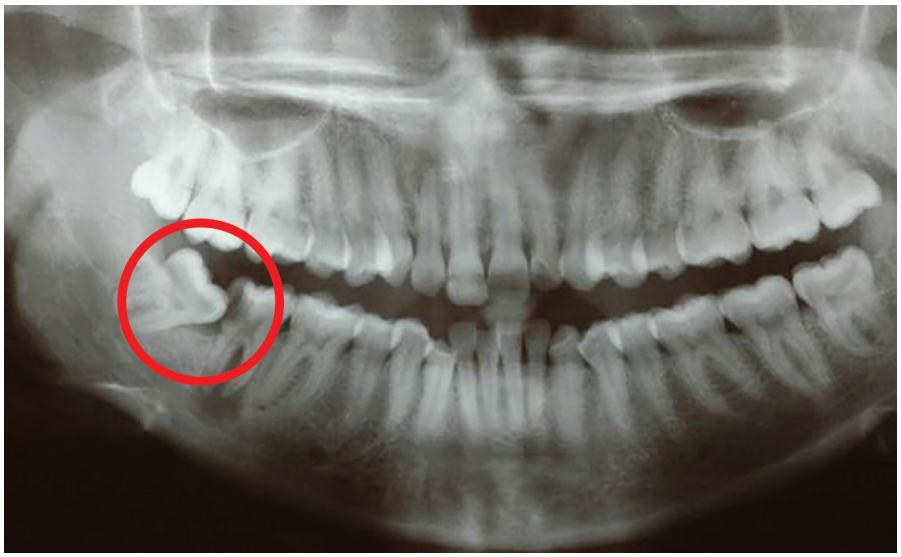


Figure 1. Radiograph showing a full set of 32 permanent teeth. In three quadrants, the third permanent molars (M3s) have erupted into a normal position. The lower right M3 (circled) became impacted into the adjacent second permanent molar tooth, which, as a consequence, has suffered extensive dental caries (the radiolucent area in the crown of the tooth) resulting in a dental abscess (the radiolucent area around the apices of the roots of the tooth).

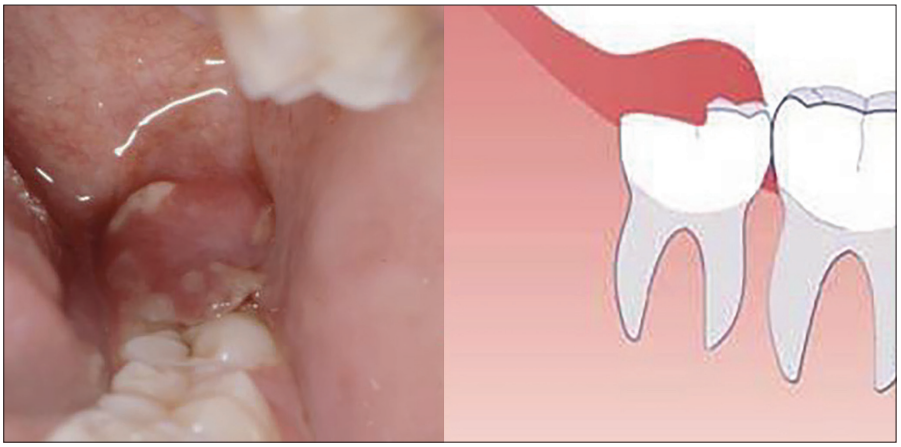
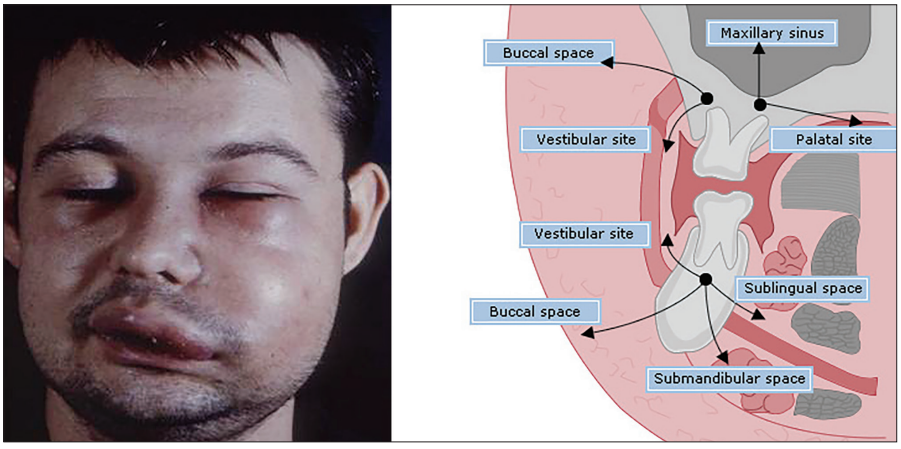


Figure 2. Clinical picture and cartoon of infection in the soft tissues overlying a partially erupted lower right M3, better known as pericoronitis. The white patches in the clinical picture are 'scarring' caused by trauma from the opposing, fully erupted upper left M3.

Figure 3. Left: clinical picture of a patient presenting with acute spreading infection, stemming from a right mandibular M3 pericoronitis. Given the risk of significant morbidity, this patient requires referral to an oral-maxillofacial surgeon for urgent care. Right: illustrates potential tissue spaces where infection can spread from an M3 pericoronitis.



may result in the need to extract both the affected teeth.

EXTRACTION AND POSTOPERATIVE PROBLEMS

Current NICE guidelines[2] advocate no prophylactic surgery; however, it is widely considered to be indicated in patients with planned medical procedures including transplant and heart valve surgery, chemo-, and radiotherapy, in particular radiotherapy of the jaws, and the prescription of bisphosphonates or other bone resorption modifiers. Prophylactic surgery may be indicated also in individuals such as armed forces personnel who may experience periods of limited access to dental services.

Because M3s are often largely contained in bone, surgical extraction, including the removal of some bone, is normally required. Postoperatively, paracetamol or ibuprofen pain relief is typically indicated.

The risks of M3 extraction (<5%) include postoperative infection or a painful dry socket and temporary or permanent sensory neuropathy of the lingual (tongue) and inferior alveolar (lip) nerves (0.1–2%). Individuals presenting with any of these problems should be encouraged to return to their dentist for reassurance, irrigation of the socket, and analgesia. No antibiotics are required for this condition.

In summary, pericoronitis associated with an erupting wisdom tooth is common. The preferred management is patient reassurance, improved oral hygiene, adjunctive mouthwash, analgesia and referral. If an individual presents with swollen face, lymphadenopathy, trismus, together with additional signs of spreading systemic infection, including pyrexia, difficulty swallowing, or airway impingement, an urgent referral is required for immediate extraction, drainage of infection, and, if required, parenteral antibiotics if tooth extraction is delayed or pus drainage is incomplete.

Patient consent

The patient consented to the publication of these images.

Provenance

Freely submitted; externally peer reviewed.

Competing interests

The authors have declared no competing interests.

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