SIGN

Management of Unerupted and Impacted Third Molar Teeth

Quick Reference Guide

REMOVAL OF UNERUPTED AND IMPACTED THIRD MOLARS IS NOT ADVISABLE:

- B ✗ In patients whose third molars would be judged to erupt successfully and have a functional role in the dentition.
- C ✗ In patients whose medical history renders removal an unacceptable risk to the overall health of the patient or where the risk exceeds the benefit.
- B ✗ In patients with deeply impacted third molars with no history or evidence of pertinent local or systemic pathology.
- C ✗ In patients where the risk of surgical complications is judged to be unacceptably high, or where fracture of an atrophic mandible may occur.
- C ✗ Where the surgical removal of a single third molar tooth is planned under local anaesthesia the simultaneous extraction of asymptomatic contralateral teeth should not normally be undertaken.

REMOVAL OF UNERUPTED AND IMPACTED THIRD MOLARS IS ADVISABLE:

- C ✓ In patients who are experiencing or have experienced significant infection associated with unerupted or impacted third molar teeth.
- C ✓ In patients with predisposing risk factors whose occupation or lifestyle precludes ready access to dental care.
- C ✓ In patients with a medical condition when the risk of retention outweighs the potential complications associated with removal of third molars (e.g. prior to radiotherapy or cardiac surgery).
- C ✓ In patients who have agreed to a tooth transplant procedure, orthognathic surgery, or other relevant local surgical procedure.
- C ✓ Where a general anaesthetic is to be administered for the removal of at least one third molar, consideration should be given to the simultaneous removal of the opposing or contralateral third molars *when the risks of retention and a further general anaesthetic outweigh the risks associated with their removal*.

STRONG INDICATIONS FOR REMOVAL:

- C ✓ One or more episodes of infection such as pericoronitis, cellulitis, abscess formation; or untreatable pulpal/periapical pathology.
- B ✓ Caries in the third molar which is unlikely to be usefully restored, or caries in the adjacent second molar which cannot satisfactorily be treated without the removal of the third molar.
- B ✓ Periodontal disease due to the position of the third molar and its association with the second molar.
- B ✓ Cases of dentigerous cyst formation or other related oral pathology.
- B ✓ Cases of external resorption of the third molar or of the second molar where this would appear to be caused by the third molar.

OTHER INDICATIONS FOR REMOVAL:

- C ✓ For autogenous transplantation to a first molar socket.
- C ✓ In cases of fracture of the mandible in the third molar region or for a tooth involved in tumour resection.
- C ✓ An unerupted third molar in an atrophic mandible.
- C ✓ Prophylactic removal of a partially erupted third molar or a third molar which is likely to erupt may be appropriate in the presence of certain specific medical conditions.
- C ✓ A partially erupted or unerupted third molar close to the alveolar surface, prior to denture construction or close to a planned implant.

KEY A B C indicates grade of recommendation ☑ good practice point

SIGN Publication Number 43

CLINICAL ASSESSMENT

☑ Clinical assessment should be carried out with the aim of assessing the status of the third molars and excluding other causes of the symptoms.

B Routine radiographic examination of unerupted third molars is NOT recommended.

☑ Radiological assessment is essential prior to surgery, but does not need to be carried out at the initial examination.

CLINICAL ASSESSMENT

- *eruption status of third molar*
- *presence of local infection*
- *caries in or resorption of the third molar or adjacent tooth*
- *periodontal status*
- *orientation and relationship of the tooth to the inferior dental canal*
- *occlusal relationship*
- *temporomandibular joint function*
- *regional lymph nodes*

Any associated pathology should be noted.

RADIOLOGICAL ASSESSMENT

- *type and orientation of impaction and the access to the tooth*
- *crown size and condition*
- *root number and morphology*
- *alveolar bone level, including depth and density*
- *follicular width*
- *periodontal status, adjacent teeth*
- *relationship or proximity of upper third molars to the maxillary antrum and lower third molars to the inferior dental canal*

B
- **Diversion of the inferior dental canal**,
- **darkening of the root where crossed by the canal**, or
- **interruption of the white lines of the canal**

are associated with a significantly **increased risk of nerve injury** during third molar surgery.

Great care should be taken in surgical exploration and the decision to treat should be carefully reviewed. **The patient should be carefully advised of the risk.**

CLINICAL MANAGEMENT

☑ At operation, the whole tooth should be removed and wound toilet completed. Any suspected pathological material should be sent for examination.

B Consider **preoperative steroids** if risk of significant postoperative swelling.

B Consider **antibiotics** if signs of sytemic involvement (pyrexia, regional lymphadenopathy).

☑ Consider antibiotics also in severe cases where there is acute infection at the time of operation, significant bone removal, or prolonged operation.

SERIOUS COMPLICATIONS

Fracture of the mandible or maxilla:
Treat at time of surgery or arrange immediate referral.

Oro-antral communication: Repair at time of surgery, usually with a buccal advancement flap. Antibiotic therapy is advisable and the patient should avoid nose blowing.

Broken instrument: Remove at time of surgery. If not retrievable, inform the patient and record in notes.

Nerve damage: For complete transection of lingual or inferior dental nerves, arrange immediate nerve repair by experienced surgeon. For partial damage, debride gently and maintain good apposition of the ends.

COMMON COMPLICATIONS

Haemorrhage:
Control at time of surgery. Soft tissue bleeding may require haemostatic agents, bipolar diathermy and/or sutures.

Bruising:
Patients should be informed that bruising is common and will usually resolve within two weeks.

Displacement:
Appropriate instruments should be in place prior to elevation to help prevent displacement. Recover any displaced tooth at time of surgery if possible, or arrange referral to a specialist centre.

Wound dehiscence:
If no pain or infection, advise patients to continue wound toilet (e.g. hot salty mouthwashes, socket syringing).

Damage to adjacent teeth:
Inform patient at time of surgery (or when fully conscious). Record in notes and arrange repair if required.

☑ A review appointment is required:
- where non-resorbable sutures have been placed
- where complications arise
- at the patient's or surgeon's request.

Derived from the national clinical guideline recommended for use in Scotland by the Scottish Intercollegiate Guidelines Network (SIGN), Royal College of Physicians of Edinburgh, 9 Queen Street, Edinburgh EH2 1JQ

Available on the SIGN website: www.sign.ac.uk

This guideline was issued in March 2000 and will be reviewed in 2002