



Trauma to teeth and jaw

Clinical Practice Guideline Emergency Department

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Haemorrhage

The child who has had recent extractions may suffer from a secondary haemorrhage from the extraction site.

Management

Ensure adequate pain control has been administered. Wash out the patient's mouth with cold water and remove blood clots with a gauze swab to identify the source of bleeding. Position the patient so their head is elevated and place a gauze swab in the mouth so direct pressure is applied to the bleeding site and ask the patient to bite firmly and steadily for 20 minutes. They should not "chew up" the gauze. If bleeding is not controlled in 40 minutes (2 gauze swabs), the Dentist should be contacted.

Fractures of the mandible or maxilla

Management

The Dentist on-call should be notified immediately after the diagnosis is made, even if other injuries are the main problem. The Dentist will assess the patient and consult with the duty Oral Surgeon.

Tooth fracture

Ascertain if the tooth is a primary or permanent tooth. Most fractured teeth are highly sensitive to mechanical or thermal stimulation though not considered an emergency and can be managed in a routine clinical environment.

Management

Uncomplicated crown fractures

Involve only the outermost layers of the tooth and do not require urgent treatment. Referral to a community dentist is often appropriate after discussion with the duty dentist.



Tooth fractures continued

Complicated crown fractures

Involve the inner portion of the tooth, the dental pulp. On examination a pink/red or bleeding centre is noted that is highly sensitive to stimulation. These injuries represent a higher priority for dental care.



Dentoalveolar injuries

Intrusion

The tooth is displaced into the gum along its long axis

Primary tooth

Do not attempt to reposition, refer to a Dentist. Further movement of the primary tooth may result in damage to the unerupted permanent tooth. An intrusion of up to 50% that is firm in position is often monitored for re-eruption over time and requires no immediate management.

Permanent tooth

The need to reposition an intruded permanent tooth is often determined by the stage of development of the tooth; requirement for treatment is generally associated with the onset of adolescence, and will require *urgent* treatment by a staff Dentist.



Luxation

The tooth is moved from its normal position, the correct nomenclature indicating the direction of movement of the tooth crown (**labial luxation, palatal luxation or extrusive luxation**). The injury is usually associated with tearing of the gum margin and/or fracture of the alveolar bone. The tooth is usually loosened, but may be firm if lodged in an alveolar fracture.

Primary tooth

Often requiring management under general anaesthesia for definitive treatment, luxated primary teeth are often monitored if they are stable in position and not interfering with closure of the jaw. Loose or malpositioned teeth that affect the bite require extraction.

Permanent tooth

The majority of displaced permanent teeth will require repositioning and splinting. The success of treatment is inversely proportional to the time elapsed since the injury; contact a Dentist *immediately*.



Avulsion

The tooth is completely dislodged from the socket, usually out of the mouth.

Primary tooth

NEVER replant an avulsed primary tooth, this may damage the developing permanent tooth. If in isolation urgent Dental consultation is not required.

Permanent tooth

Replant a permanent tooth as soon as possible. There are alternative storage media for avulsed teeth, but none is as ideal as the socket.

CONTACT THE ON CALL DENTIST IMMEDIATELY FROM TRIAGE, DO NOT AWAIT A MEDICAL CONSULT FIRST.



Management of an avulsed permanent tooth

Issue antibiotic prophylaxis if required using a suitable dose of amoxicillin or clindamycin. Prophylaxis is required only for patients where the consequences of transient bacteraemia are significant (e.g. previous bacterial endocarditis, immunosuppressive therapy, recently repaired cardiac defect).

Handle the tooth only by its crown, never touching the root surface.

Administer an infiltration of local anaesthetic (with adrenaline 1:100,000).

Ensure tooth is clean and free of debris.

If dirty, ideally rinse in Hank's Balanced Salt Solution **OR** milk, saline (0.9% NaCl) **OR** where there is no alternative, plain water for less than 10 seconds.

Examine the socket: reposition socket wall if fractured, irrigate large blood clot with saline or local anaesthetic.

Replant tooth to most ideal position with fingers holding only the crown; reposition adjacent teeth if moved from position

Mould alveolar bone with fingers.

Irrigate degloving injuries of mucosa and suture if margins are not well opposed.

Retain replanted and repositioned teeth by moulding several ply of domestic aluminium foil extending at least 2 teeth either side of the repositioned teeth.

Issue with 0.2% Chlorhexidine Oral Gel, to be used twice daily for 1 week; advise a soft diet for 2 weeks.

Check tetanus immunisation status.

Discharge with **oral antibiotics**:

- For children >12 years of age: Doxycycline 2x per day for 7 days at appropriate dose for patient age and weight.
- For children <12 years of age: Phenoxymethyl Penicillin at an appropriate dose for patient age and weight.

Dental treatment is required as soon as possible to form a stable splint for the traumatised tooth.

If unable to replant: Store completely submerged in Hank's Balanced Salt Solution or milk; alternatively wrap in clingwrap covered with patient's saliva. Seek dental treatment as soon as possible.

Do nots

DO NOT allow the tooth to dry. Avulsed teeth are ideally stored in Hank's Balanced Salt Solution (available in the dental cupboard in ED), though milk or wrapped in clingwrap with the patient's saliva or stored in the patients mouth are alternatives. Saline is a less than ideal storage medium and plain water should be avoided.

DO NOT scrape the root surface.

DO NOT rinse the tooth in water for a prolonged period.



Soft Tissue Injury

Gingival lacerations rarely require suturing.

Most will heal perfectly well by themselves, or with simple measures such as lip taping. Gingival lacerations only require suturing if there is:

- Significant tissue displacement
- Bone exposure
- Degloving of the maxilla or mandible
- Exposure of tooth roots
- Impaction of debris
- A requirement of haemostasis for other requirements

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Princess Margaret Hospital
Perth Western Australia