The OMFS Survival Guide

Dental Trauma

Aims & Objectives

- Participants to understand the relevant treatments for dental trauma in a hospital setting
- To be able to apply current guidelines and pre- existing knowledge to safely treat dental trauma in adult and paediatric populations
- Participants to be able to deliver appropriate post- injury/ treatment advice relevant to their specific patients

Assessment of Dental Trauma

- **History:** Take a thorough history to assess for other possible injuries. Ensure all past medical history and drug history has been taken- may affect treatment plan. Consider non-accidental injury and safeguarding.
- **Examination:** Do a full trauma exam of the face, not just intra-oral in case of other injuries. Consider need for CXR if missing fragments/teeth aren't accounted for.

Trauma in the Primary Dentition

- **Enamel Fracture:** Account for fragments.
    - **Follow Up:** Routine dental care

- **Enamel-Dentine Fracture:** Account for fragments. If available, apply a GIC bandage.
    - **Follow Up:** 8 weeks to check healing, consider need for restorations

- **Crown Fracture:** Stop bleeding with txa/adrenaline- soaked gauze. Consider extraction.
    - **Follow Up:** 1 week, 8 weeks, 1 year. Only radiograph if endodontic treatment carried out.

- **Crown/ Root Fracture:** Extract any loose fragments. If risk of damage to permanent successor can leave root fragment in situ.
    - **Follow Up:** 1 week, 8 weeks, 1 year. Only radiograph if endodontic treatment carried out. If extracted- routine care.

- **Root Fracture:** Flexible splint if non- mobile or no occlusal interference. If grossly mobile/aspiration risk or interfering with occlusion or feeding- extract mobile portion. Can leave root fragment in situ to resorb.
    - **Follow Up:** Review at 1 week, remove splint after 4 weeks, then review at 8 weeks and 1 year. If extracted- routine care.

- **Alveolar Fracture:** Flexible splinting under LA/ GA as appropriate.
    - **Follow Up:** Review at 1 week, remove splint after 4 weeks, then review at 8 weeks and 1 year.

- **Concussion:** Reassurance.
    - **Follow Up:** Review at 1 and 8 weeks for periodontal healing.

- **Subluxation:** Reassurance.
    - **Follow Up:** Review at 1 and 8 weeks for periodontal healing.

- **Extrusion**: If no/minimal occlusal interference- leave to spontaneously reposition. If severe displacement- extract.
    - **Follow Up:** If tooth left- review at 1 & 8 weeks then 6m and 1 year for any complications. If extracted- routine care.

- **Lateral Luxation** If no/minimal occlusal interference- leave to spontaneously reposition. If severe displacement- extract.
    - **Follow Up:** If tooth left- review at 1 & 8 weeks then 6m and 1 year for any complications. If extracted- routine care.

- **Intrusion**: Leave to spontaneously reposition.
    - **Follow Up:** Review at 1 & 8 weeks then 6m and 1 year for any complications. Expected timeline for reposition- 6-12 months.

- **Avulsion**: Do not reimplant!
    - **Follow Up:** Routine dental care.

Trauma in the Permanent Dentition

- **Enamel Fracture:** Account for fragments. If sharp- can try and dress with GIC, or advise to see GDP for smoothing.
    - **Follow Up:** Review at 6-8 weeks and 12m. Very low risk of pulpal necrosis.

- **Enamel-Dentine Fracture:** Account for fragments. If available, apply a GIC bandage/ temporary restoration.

    - **Follow Up:** Permanent restoration by GDP. Review at 6-8 weeks and 12m. Very low risk of pulpal necrosis.

- **Crown Fracture involving pulp:** Stop bleeding with txa/adrenaline- soaked gauze. Dress with GIC.
    - **Follow Up:** In primary care can direct pulp cap or partial pulpotomy. Review at 6-8 weeks, 3m, 6m, 1 year. Only radiograph if endodontic treatment carried out.

- **Crown/ Root Fracture:** Extract any loose fragments, can seal pulp with GIC, or extract if poor prognosis.
    - **Follow Up:** 1 week, 8 weeks, 1 year. Only radiograph if endodontic treatment carried out. If extracted- routine care.

- **Root Fracture:** If little/ no mobility- reassure and advise soft diet. If displaced- flexible splint. Consider extraction depending on patient's wishes.
    - **Follow Up:** Splint removal at 4 weeks (4 months if cervical). Review at 2 weeks, 6-8 weeks, 3m, 6m and 1 year. If extracted- routine care.

- **Alveolar Fracture:** Flexible splinting under LA/ GA as appropriate.
    - **Follow Up:** Review at 1 week, remove splint after 4 weeks, then review at 8 weeks, 3m, 6m and 1 year.

- **Concussion:** Reassurance.
    - **Follow Up:** Review at 4 weeks and 1 year for periodontal healing.

- **Subluxation:** Reassurance.
    - **Follow Up:** Review at 2 weeks, 3m, 6m and 1year.

- **Extrusion**: Reposition and flexible splint under LA.
    - **Follow Up:** Splint removal at 4 weeks. Review at 2 weeks, 6-8 weeks, 3m, 6m and 1 year

- **Lateral Luxation** Reposition and flexible splint under LA.
    - **Follow Up:** If tooth left- review at 1 & 8 weeks then 6m and 1 year for any complications. If extracted- routine care.

- **Intrusion**: Leave to spontaneously reposition if immature root. If mature- <7mm intrusion- leave. If >7mm- reposition and flexible splint under LA.
    - **Follow Up:** Remove splint at 2 weeks, consider RCT at 4 weeks. Review at 6-8 weeks then 3m, 6m and 1 year for any complications.

- **Avulsion**: Extra-oral dry time of <60 mins has best prognosis. If tooth has been left in suitable storage medium (e.g. saliva, milk) and over 60 mins reimplant. If dry

and over 60 mins- discuss with patient re: realistic prognosis. Flexible splint to be applied under LA

- **Follow Up:** Splint removal in 2 weeks. Review at 1 week, 2weeks, 6-8 weeks, 3m, 6m and 12m.

Tips for Splinting in A&E

- Have lots of cotton wool rolls handy for moisture control!
- Ideally use orthodontic wire, but any low gauge, flexible wire will do
- Sandwich the composite around the wire for a better seal
- Flowable composite is easier to use when you don't have an assistant

Further Reading

IADT Dental Trauma Guidelines 2020:
https://www.dentaltrauma.co.uk/Guidelines.aspx

British Society of Paediatric Dentistry
https://www.bspd.co.uk/Professionals/Resources/Clinical-Guidelines-and-Evidence-Reviews/BSPD-Guidelines