Overview

- H&P/Maxillofacial Examination
- Radiographic Exam
- Injury
- Treatment
Examination

- Thorough History
  - CC, HPI, PMH, PSH, FH, SH, Meds, All, ROS
- Full Examination
  - R/O Spinal injuries, Head Injuries
  - Cleanse area for visualization
  - Account for missing teeth, restoration fragments (Aspiration? Swallowed? In soft tissues?)
Examination

• Signs of underlying injury
  – Sublingual ecchymosis
  – Step defects
  – crepitation
  – malocclusion
  – gingival lacerations
Severe malocclusion with posterior contact only
Examination

• Mobility
• Bleeding
• Tooth fractures
• Percussion
• Vitality testing - controversial
Radiographic Exam-hard tissues

- Ideally 2 views at right angles
- Panorex
- PA (most detail)
- Occlusal
- Hospital setting? Mandibular series, Caldwell views may supplement.
- Chest and KUB/abdominal films (aspiration vs swallowed)
- Soft Tissue x-rays for foreign bodies
Radiographic Exam-soft tissues
Root fragments with other foreign bodies in lip
Classification of Dental Injuries

- Dental Tissues and Pulp
  - Ellis Classification: 1-4
  - Uncomplicated Crown Fx
  - Complicated Crown Fx
  - Uncomplicated Crown root Fx
  - Complicated Crown root Fx
  - Root Fx

**Figure 21-4** Ellis classification: I—fracture within enamel; II—fracture of enamel-dentin; III—fracture involving pulp; IV—fractures involving the roots.
Exposed nerve with bleeding from pulp
Treatment

- Ellis Class III
  - Time
    - Best if within 2 hours
  - Stage of tooth development
    - Mature – favor pulp extirpation
    - Immature – favor preservation of pulp
  - Size of pulp exposure
    - Pinpoint (<1.5 mm)
      - Direct pulp cap with CaOH if within 24 hours
    - Large exposure
      - CaOH Pulpotomy on open apex,
      - Root canal therapy for closed apex
Treatment

• Root Fracture
  – Often not immediately apparent on x-ray
    • 1-2 weeks s/p injury: inflammation, hemorrhage, resorption separates segments
  – Location
    • Cervical 1/3: Extraction vs. Orthodontic extrusion
    • Middle 1/3: If mobile rigid splint 2-3 months
    • Apical 1/3: Best prognosis, only splint if mobile
Splinting to adjacent teeth using bonding resin
Intruded teeth, orthodontically extruded over 4-6 months
Treatment

- **Avulsion (Exarticulation)**
  - Fate of tooth depends upon viability of PDL
  - Immediate re-implantation if possible
  - Storage solution if not: HBSS, Viaspan, Milk, Saliva, Saline
  - Do not rinse in H2O
  - PDL becomes irreversibly necrotic after 2 hours
  - Open Apex (>1 mm) better prognosis than closed
Avulsed Central Incisor
Contact with crown only, irrigated with normal saline
Tooth repositioned
Splinted Central Incisor
**Figure 21-13** Hank’s balanced salt solution, commercially available as Save-A-Tooth (Phoenix Lazarus, Inc.).

**Figure 21-14** ViaSpan, cold storage solution currently available as an organ transport solution.

<table>
<thead>
<tr>
<th>Table 21-2 Solutions to Replenish Periodontal Ligament Cell Metabolites</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Solution</strong></td>
</tr>
<tr>
<td>------------------------</td>
</tr>
<tr>
<td>Hank's balanced salt solution</td>
</tr>
<tr>
<td>ViaSpan</td>
</tr>
<tr>
<td>Cow’s milk</td>
</tr>
</tbody>
</table>
Links

– Clinical management of the avulsed tooth.

– **Trope M.**
– Department of Endodontics, School of Dentistry, University of North Carolina at Chapel Hill, USA.
– Replant immediately after gentle washing if practical.
– Place tooth in HBSS while exam is conducted and history is taken.
– Extraoral dry time < 20 minutes:
  • Closed apex—replant immediately after gentle washing.
  • Open apex—soak in 1 mg doxycycline in 20 mg saline for 5 minutes.
– Extraoral dry time 20 to 60 minutes: Soak in HBSS for 30 minutes and replant.
– Extraoral dry time > 60 minutes: soak in citric acid, 2% stannous fluoride, and doxycycline and replant. Endodontics can be done extraorally.
Classification of Dental Injuries

- Injuries to supporting bone
  - Communution of alveolar housing (intrusive, lateral)
  - Fx of single wall
  - Fx of alveolar process, en bloc
  - Fx involving main body of max., mand.

Communuted alveolar fracture
Treatment

• Alveolar Fracture
  – Open or closed technique (incision placement)
  – Digital manipulation
  – Rigid stabilization 4-6 weeks
  – Pulpal healing dependent on fracture location
  – Consider early removal of teeth that have lost bony support
Displaced alveolar segment

## Treatment

- **Stabilization Times**
  - Subluxation: 2-3 weeks
  - Lateral Luxation: 2-3 weeks
  - Avulsion: 7-10 days
  - Root Fx: 2-3 months
  - Alveolar Fx: 4-6 weeks

- If the diagnosis is Fx, then rigid fixation
Common oral lesions
PERICORONITIS associated with impacted third molar
Treatment of Pericoronitis

1) local debridement using combination H2O2/H2O under flap
2) administration of penicillin derivative (clindamycin if allergic)
3) Allow soft tissue infection to resolve
4) Remove offending tooth
Common Mucocele traumatically induced
Tobacco induced leuloplakia
Sialolith in submandibular duct
Palatal eruptions - tobacco induced
Tobacco induced salivary gland inflammation
Mandibular tori - variation of normal anatomy
Palatal maxillary TORI
Burn from topical aspirin
Herpetic gingivostomatitis