Management of Impacted Teeth

DEPT OF OMFS
SRM KDC
Third Molar Development
<table>
<thead>
<tr>
<th></th>
<th>Average Age (Yrs)</th>
<th>Range (Yrs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tooth Germ Visible</td>
<td>9.8</td>
<td>7.5-12.1</td>
</tr>
<tr>
<td>Cusp Mineralization Complete</td>
<td>11.9</td>
<td>8.8-14.7</td>
</tr>
<tr>
<td>Crown Formation Complete</td>
<td>14.1</td>
<td>10.5-18.1</td>
</tr>
<tr>
<td>Roots, One-half Formed</td>
<td>16.3</td>
<td>12.6-20.2</td>
</tr>
<tr>
<td>Roots, formed; Apex Opened</td>
<td>18.2</td>
<td>14.4-22.1</td>
</tr>
</tbody>
</table>
Third Molar Agenesis

- Most Common congenitally missing tooth
- 9-20% Incidence
- Female/Males; 3:2 ratio
Impaction Frequency

1. Maxillary Third Molar
2. Mandibular Third Molar
3. Maxillary Canines
4. Mandibular Premolars
Etiology of Third Molar Impaction

- Inadequate bony arch length
- Failure of developmental rotation
- Retarded maturation
Indications for Extraction

• Prevention /Treatment of percornitis
• Prevention of periodontal disease
• Prevention of dental caries
• Prevention of Root Resorption
Indications for Extraction

- Prevention of odontogenic cysts and tumors
- Teeth under dental prosthesis
- Prevention of jaw fracture
- Management of unexplained pain
Indications for extractions

- Orthodontic considerations
  - Crowding of mandibular incisors
  - Obstruction of treatment
  - Orthognathic surgery
Possible Contraindications to removal of Impacted Teeth

• Extremes of age
• Compromised medical status
• Surgical damage to adjacent structures
Classifications Systems

- Angulation
- Relationship to anterior border of ramus
- Depth of impaction
- Nature of overlying tissue
Angulation

- Mesionangular - 45% - Least difficult
- Horizontal - 10% -moderately difficult
- Vertical - 40% -moderately difficult
- Distoangular - 5%- most difficult
Relationship to Anterior Border of Ramus (Pell and Gregory)

- Class I - adequate room to erupt
- Class II - one half covered
- Class III - completely embedded
Depth of Impaction

- Class A, B, and C
- Based on level of occlusal plane
Nature of Overlying Tissue

- Soft tissue impaction
- Partial bony impaction
- Complete bony impaction
Root Morphology

- length and width
- Number
- Curvature
- PDL space
Age

- Ideal 16-20 years
- Roots 1/3 to 2/3 formed
Other Important Factors

- Size of Follicular Sac
- Density of Surrounding Bone
- Contact with Mandibular Second Molar
- Relationship to Inferior Alveolar Nerve
Classification of Maxillary Third Molars

• Angulation
  – Vertical  63%
  – Distoangular  25%
  – Mesioangular 12%

• Depth - Class A, B, and C
Maxillary Third Molars

- Relationship to Maxillary Sinus
- Maxillary Tuberosity
Factors that make impaction surgery more difficult

1. Distonangular
2. Class 3 ramus
3. Class C depth
4. Long, thin roots*
5. Divergent curved roots
6. Narrow periodontal ligament*
7. Thin follicle*
8. Dense, inelastic bone*
9. Contact with second molar
10. Close to inferior alveolar canal
11. Complete bone impaction
Factors that make impaction surgery less difficult

1. Mesioangular position
2. Class 1 ramus
3. Class A depth
4. Roots 1/3 to 2/3 formed*
5. Fused conical roots
6. Wide periodontal ligament*
7. Large follicle*
8. Elastic bone*
9. Separated from second molar
10. Separated from inferior alveolar nerve*
11. Soft tissue impaction
5 Basic Steps for removal of third molars

- Reflect adequate flaps for access
- Removal of overlying Bone
- Sectioning the tooth
- Delivery with elevator
- Debridement of wound and closure
Perioperative Patient Care

- Anesthetic Technique - IV Anesthesia vs Local
- Anesthesia
- Antibiotic Coverage
- Steroids
Common Postsurgical Sequela

• Mild bleeding
• Swelling
• Trismus
• Pain
Complications

• Alveolar Osteitis - 3 -25%
• Nerve Disturbances - 0.6 - 5%
  – Lingual -approximately 1%
  – Inferior Alveolar 1.5 -5%
  – Sinus Complications
  – Fractured Mandible
  – Infections
  – Displacement of teeth/foreign bodies
  – TMJ complications