Tooth and Root Anatomy

Universal Identification System

Points to remember
First molars are;
3, 14, 19, 30
Canines are;
6, 11, 22, 27

International Identification System

Central incisor is Tooth #1, third Molar is tooth #8
Identify quadrant then the tooth

Which is tooth #33?

SEXTANTS

Identify and point to the other line angles
Teeth develop from “lobes” (usually 4, sometimes 5)

A fissure is formed where two lobes come together

A “pit” is formed where two fissures cross

How many lobes did this tooth have?

Mamelons are evidence of three lobes making body of tooth

Fourth lobe makes cingulum, check pit for caries

Depression on lingual of maxillary anteriors makes polishing difficult

Lingual of Maxillary Central Incisor

Two triangular ridges make a transverse ridge if the cusps oppose each other

Two triangular ridges make an oblique ridge if the cusps are not opposing.

Maxillary First Molar

• Four cusps
• Three roots, two buccal and one lingual
• Small buccal pit
• Cusp of Caribelli
• Oblique ridge
• Lingual groove
Maxillary First Molar

- Cusp of Caribelli
- Oblique ridge
- Lingual (L. or Li) groove

Maxillary First Molar

- Point to the mesiobuccal cusp
- On what cusp is the cusp of Caribelli located?
- Between what two cusps
- Is the lingual groove located?

Maxillary Anteriors

- Canine is longest tooth in mouth
- Centrals and laterals have prominent lingual fossa, often a prominent cingulum
- Lateral incisors most often congenitally missing

Maxillary Premolars

- 1st premolar often has bifurcated root
- 1st premolar has concavity on mesial surface apical to contact
- Has groove crossing marginal ridge

Mandibular first molar

- Distinguishing features
  - Five cusps
  - Two roots (mesial, distal)
  - Mesial root has concavity
  - Pronounced buccal pit
  - 2nd molar has four cusps
Mandibular Anteriors

- Central smallest tooth
- Cuspid sometimes has bifurcated root
- Cuspid has root concavity on mesial

Mandibular Premolars

- 1st premolar is △
- 2nd premolar is □

2nd premolar often congenitally missing

Root Anatomy

Healthy bone height is 1 mm apical to CEJ. Periodontal disease causes loss of bone, exposing roots.

Mandibular Cuspid

Depression on mesial

Depressions on roots normally caused single root trying to divide into two roots.
MAXILLARY FIRST PREMOLAR

Prominent depression on mesial

Groove crosses mesial marginal ridge

MANDIBULAR 1ST MOLAR

Depression on mesial root

MANDIBULAR PREMOLAR

Depression