MORPHOLOGY OF INDIVIDUAL PRIMARY TEETH

Studying tooth morphology includes understanding the shape, configuration and parts of a tooth. It is very important for clinical application during performing various procedures. Cavity preparations must conform to the thickness of enamel and dentin, keeping in mind the location and size of the pulp. Restoration of natural contours and morphology of deciduous teeth is needed for function, which can be achieved only with a good knowledge of tooth morphology. An accurate chronology of primary tooth calcification is of clinical significance to the dentist. It is often necessary to explain to parents the time sequence of calcification in utero and during infancy. The common observations of tetracycline pigmentation, developmental enamel defects, and generalized hereditary anomalies can be explained if the calcification schedule is known. A brief discussion of the morphology of the primary teeth is also appropriate before restorative procedures are considered for children.

MAXILLARY CENTRAL INCISOR

Labial aspect:

1. The mesiodistal diameter of the crown is greater compared to the cervicoincisal height.

2. The incisal edge is straight with sharp mesioincisal and rounded distoincisal angle.

3. The labial surface is smooth without developmental grooves or depressions

4. The mesial outline is straight whereas the distal outline is convex.

5. The mesial contact area is near the mesioincisal angle, and the distal contact area is in the incisal third.

6. The root is conical with evenly tapered sides.

Lingual aspect:

1. The cingulum and marginal ridges are well developed.

2. The lingual fossa is in the incisal third of the lingual surface.

Mesial and Distal aspects:

1. The crown is wide labiolingually in the cervical third because of prominent cingulum.

2. The labial outline shows prominent cervical ridge.

Incisal aspect:

1. The labial surface is smooth

2. Lingual surface tapers towards cingulum.

3. The crown is wider mesiodistally than labiolingually.

MAXILLARY LATERAL INCISOR

The maxillary lateral incisor is similar to maxillary central incisor except:

1. Crown is smaller than central incisor.

2. The distoincisal angle is more rounded.

3. The crown height is greater than mesiodistal width

4. The root is longer in proportion to crown height.

MAXILLARY CANINE

Labial aspect:

1. The crown shows marked cervical constriction.

2. The mesial and distal outlines are convex.

3. Maxillary canine has a long sharp cusp with two cusp ridges meeting at an acute angle.

4. The mesial cusp slope is longer and straighter than distal cusp slope.
5. The mesial and distal contact areas are near the center of the crown cervicoocclusally.

6. The root is long, slender and tapering.

7. The root length is approximately more than twice the crown height.

Lingual aspect:

1. The lingual surface of canine shows a well-developed, prominent cingulum

2. Well-developed mesial and distal marginal ridges.

3. The lingual ridge is somewhat distal to the midline of tooth.

Mesial and Distal aspects:

1. The crown appears triangular from mesial and distal aspects.

2. The cervical third of the crown is much thicker than that of the incisors.

3. The cusp tip is labial to long axis of the tooth.

4. The cervical ridge on the labial surface is prominent.

5. The root is bulky in its middle and cervical third and tapered in the apical third.

Incisal aspect:

1. The crown outline is somewhat angular and tapers considerably towards the cingulum.

2. The mesial outline is flat, tapered, angular and thicker faciolingually than in the distal half of the crown.

3. The cingulum is centered mesiodistally.

4. The crown is faciolingually broader than incisors.

MANDIBULAR CENTRAL AND LATERAL INCISOR:

1. The crowns resemble the permanent mandibular incisor but are much smaller in size.

2. The crowns have prominent labial cervical bulge

3. The roots are thin and nearly twice the length of the crowns.

4. Incisal edges are straight.

5. The distoincisal angle is rounded.

6. The mesial and distal sides taper evenly from contact areas.

7. The lingual surface shows cingulum, marginal ridges and lingual fossa.
8. The mesial aspect shows typical outline of an incisor.

MANDIBULAR CANINE:

1. There is very little difference in functional form between this tooth and maxillary canine.

2. The mesiodistal dimension of mandibular canine at root trunk is greater than mesiodistal width at contact area.

3. Mandibular canine is smaller mesiodistally than maxillary canine.

4. Mesial cusp slope is shorter than distal cusp slope.

5. Cervical ridge is less prominent than maxillary canine