

Lec:

Permanent Mandibular incisors

The mandibular incisors are four in number; two centrals and two laterals. They are also the smallest permanent teeth. The central is slightly smaller than the lateral.

Characteristic features of permanent Mandibular incisors:

1. The mesio-distal dimensions of the mandibular incisors are smaller than all other teeth.
2. The contact areas are near the incisal edge (mesially and distally) fig.1.
3. The lingual surface is relatively smooth and featureless (the marginal ridges and the Cingulum are not well developed) fig 2.
4. From proximal view the labial surface is inclined lingually so that the incisal edge is lingual to a longitudinal bisecting plane fig.3.
5. The incisal edge shows a labial slope in contrast to those of the maxillary incisors which have a lingual slope.

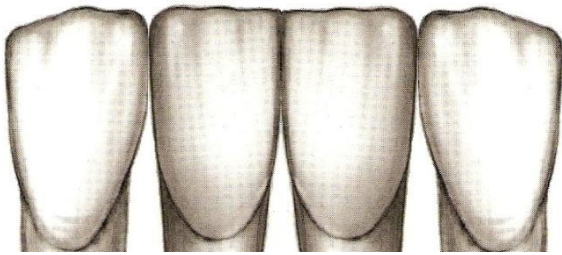


Fig. 1



Fig. 2

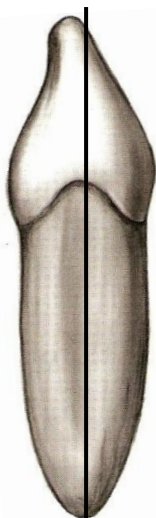


Fig. 3

DENTAL ANATOMY

Principal identifying features of mandibular central incisors:

- The mandibular central incisors occupy the position adjacent to the midline. They share a mesial contact with each other, while the distal contact is with the permanent lateral incisor.
- The mandibular central incisor normally has the narrowest mesio-distal dimension and the smallest crown size of any permanent tooth. The crown is also quite symmetrical, with mesial and distal halves nearly identical.
- Eruption age is 6 to 7 years and completion of root at age of 9 years.

Labial aspect:

1. The incisal edge is straight and nearly at right angle to the long axis of the tooth.
2. The mesial and distal outlines are almost similar.
3. Angle is more the disto-incisal rounded than the mesio-incisal angle.
4. The contact areas are within the incisal third of the crown very close to the incisal margin.
- 5. The labial surface of the crown is smooth, being flat at the incisal third and becoming more convex as it goes cervically.**
6. The mesial and distal outlines of the root are straight with a slightly distally curved root apex.

Lingual aspect:

1. The lingual surface of the crown is smooth with a very slight concavity at the incisal third fig.2.
2. No developmental grooves are found near the Cingulum.

Mesial aspect:

1. The labial outline above the cervical curvature is almost straight fig.4.
2. The lingual outline shows a shallow concavity in the incisal two-thirds ending to the blunt incisal edge, and convexity in the cingulum area or gingival third.
3. The curvature of the cervical line goes incisally about one third the length the crown fig.5.
4. The mesial surface of the root shows a broad developmental depression for most of the root which is also known as a longitudinal groove fig.6.

DENTAL ANATOMY

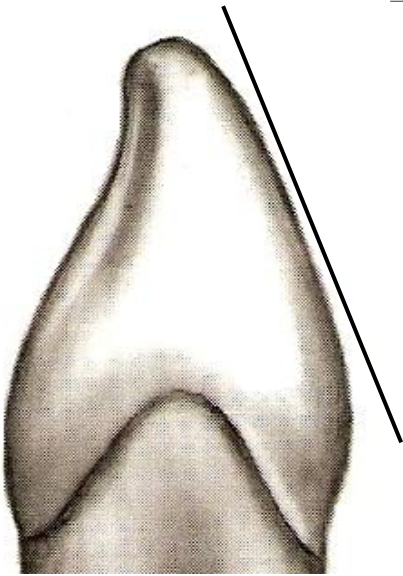


Fig. 4

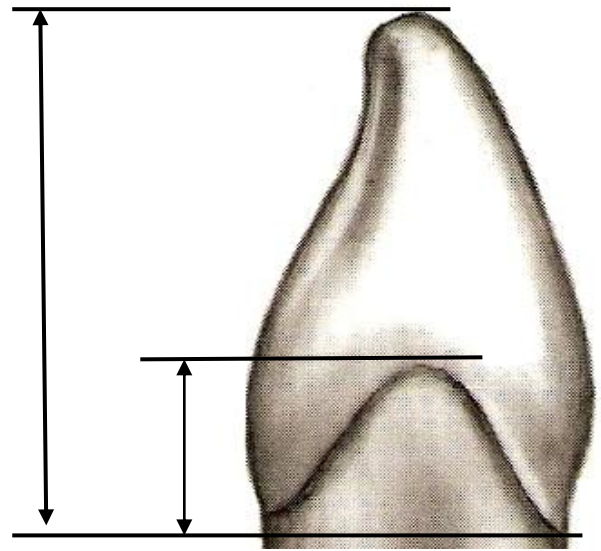


Fig. 5

Distal aspect:

1. The distal surface is similar in all aspects to the mesial, except that curvature of the cervical line extends less toward the incisal edge fig.7.
2. The developmental depression in the root is more marked than that on the mesial side.



Fig. 6

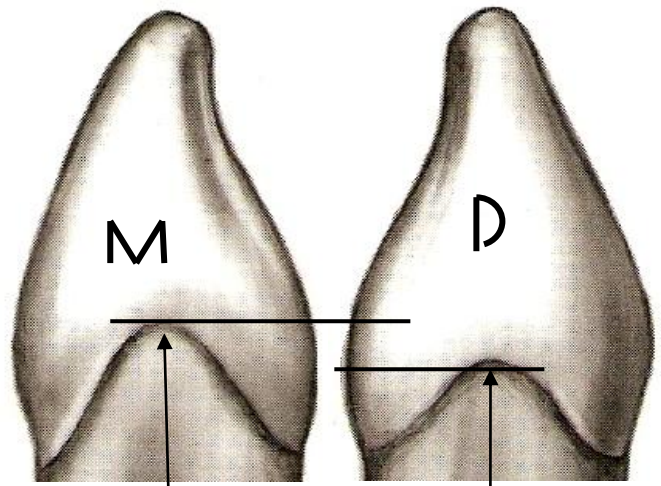
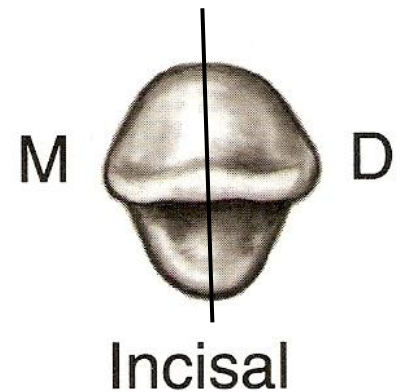


Fig. 7

DENTAL ANATOMY

Incisal aspect:

1. The mesial half of the crown is almost identical to the distal half (bilateral symmetry).
2. The incisal edge is at right angle to a bisecting line.
3. At the incisal third, the labial surface of the crown is broad and slightly convex, and the lingual surface is slightly concave.
4. More of the labial surface may be seen than of the lingual surface from this aspect.
5. Labio-lingual diameter is greater than mesio distal one.



Mandibular lateral incisor

Principal identifying features:

1. Slightly larger than Mandibular central incisor (both crown and root).
2. The incisal edge is not straight but slopes slightly gingivally toward the distal, so the mesial side of the crown is longer than the distal side fig.8.
3. The distal contact area is closer to the cervical line than mesial contact area but both are still in the incisal third.
4. Faint marginal ridge on the lingual aspect but more prominent than that in mandibular central incisor.
5. From incisal view the incisal edge is twisted distally in a lingual direction to follow the curvature of the lower arch fig.9 & 10.
6. There are mesial and distal developmental grooves on the root.

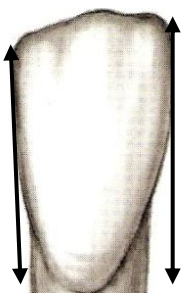


Fig.8

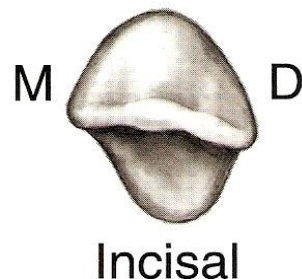


Fig. 9



Fig. 10

DENTAL ANATOMY

Some differences between maxillary and Mandibular central incisors:

FEATURES	<i>Maxillary central incisor</i>	<i>Mandibular central incisor</i>
<i>Location of the incisal edge</i>	Centered over the root	More lingually positioned
<i>Labial outline (from mesial aspect)</i>	Convex cervically, slightly convex to the incisal ridge	Slightly convex cervically, Straight to the incisal ridge
<i>Lingual aspect</i>	Feature full	Featureless
<i>Contact areas</i>	More cervically	More incisally
<i>Size</i>	Larger	Smaller