Lecture -6-

د. هبه

Permanent Mandibular Incisors

Mandibular incisors are four in number; 2 central incisors (right & left) and 2 lateral incisors (right & left).

Characteristic features of Perm. Mand. Incisors

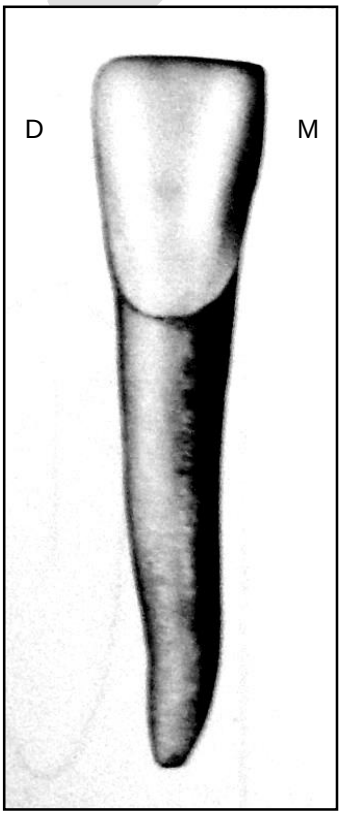
1. The mandibular incisors have smaller mesio-distal dimensions than any of the other teeth.
2. The contact areas are near the incisal ridges mesially and distally.
3. The lingual surface is relatively smooth and featureless with the marginal ridges and the cingulum being not well developed.
4. The labial surface inclined lingually so that the incisal ridge is lingual to a line bisecting the root.
5. The incisal surfaces of these teeth show a labial inclination in contrast to those of the maxillary incisors which have a lingual inclination.

Permanent Mandibular Central Incisor

Principal identifying features

1. It is the smallest tooth in the permanent dentition.
2. The incisal ridge is lingually inclined.
3. Well-defined distal longitudinal groove is seen on the root.

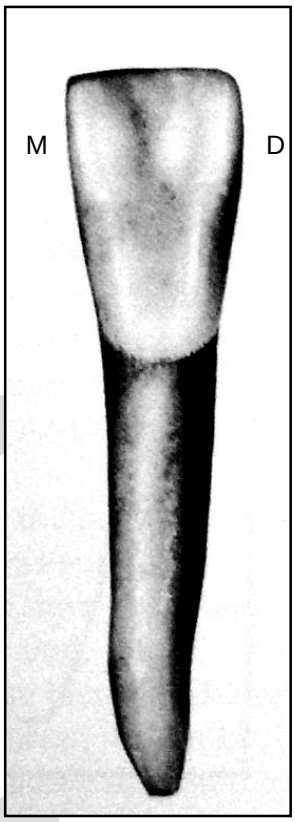
Labial Aspect



1. The incisal ridge is straight and nearly at a right angle to the long axis of the tooth.
2. The disto-incisal angle is more rounded than the mesio-incisal angle.
3. The contact areas are incisal to the junction between incisal and middle thirds of the crown.
4. The mesial and distal root outlines are straight; with a distally curved apex.
5. The labial surface of the crown is smooth; being flat at the incisal third and becoming more convex as it goes cervically.

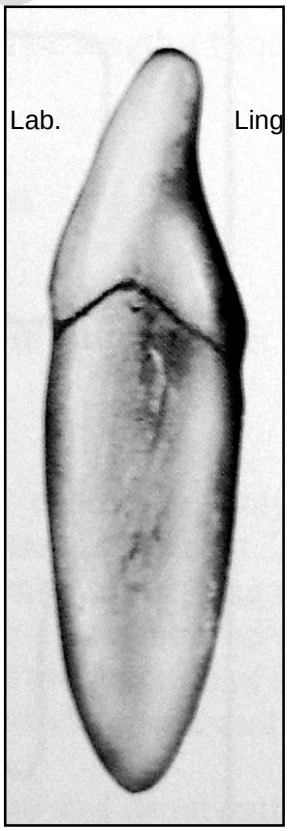
Lingual Aspect

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

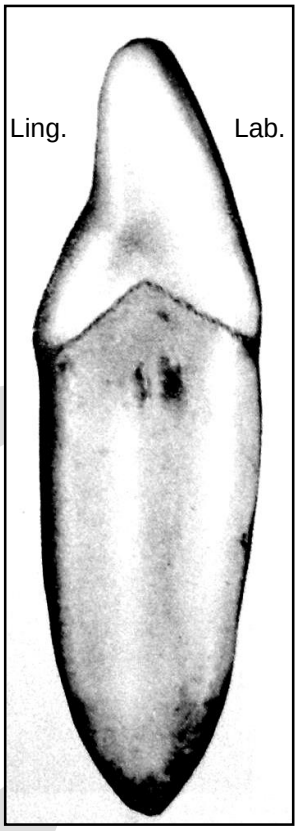


Mesial Aspect

1. The labial outline above the cervical curvature is straight.
2. The lingual outline shows a shallow concavity ending to the blunt incisal ridge which is lingual to a line bisecting the root.
3. The curvature of the cervical line goes incisally about one-third the length of the crown.
4. The mesial surface of the root showed a broad development depression for most of the root and this become deeper at the junction of the middle and apical third.

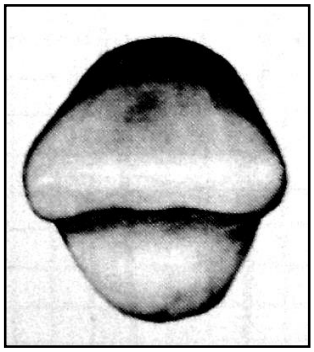


Distal Aspect



1. The cervical lines curvature is less than that mesially.
2. The developmental depression in the root is more marked than that on the mesial side with a deeper and more well-defined developmental groove in its center.

Incisal Aspect



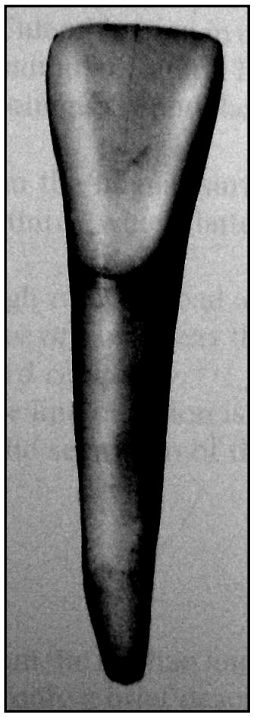
1. The mesial half of the crown is almost identical to the distal half (bilateral symmetry).
2. The incisal edge is at a right angle to a line bisecting the crown labio-lingually. (Mark of identification).
3. At the incisal third, the labial surface of the crown is broad and slightly convex, and the 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.

Permanent Mandibular Lateral Incisor

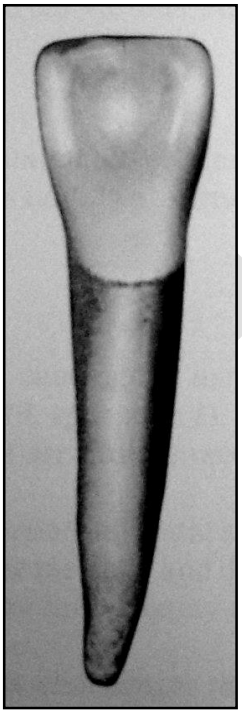
Principal identifying features

1. Slightly larger than the mandibular central incisors with fan shaped crown.
2. The crown is slightly longer, but the root is considerably longer than the mandibular central incisors.
3. The mesial side of the crown is longer than the distal side, causing the incisal ridge to slope downward in a distal direction.
4. The distal contact area is more towards the cervical area than mesial contact area.
5. Faint marginal ridges but more prominent than in mandibular central incisors.
6. The incisal edge is twisted distally in a lingual direction to follow the curvature of the lower arch.
7. There are mesial and distal developmental depressions on the root.

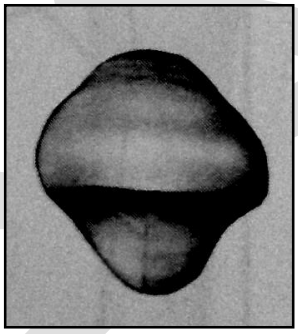
Permanent Mandibular Right Lateral Incisor



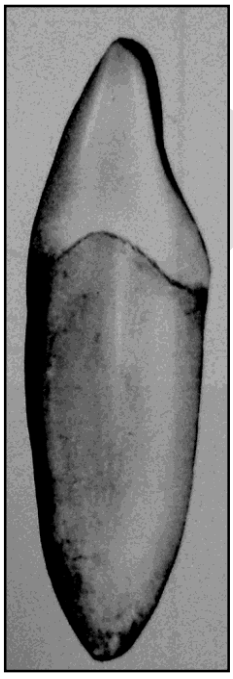
Labial Aspect



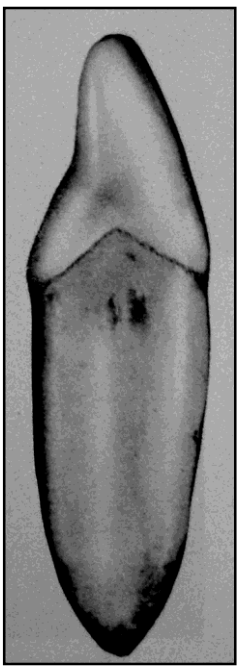
Lingual Aspect



Incisal Aspect



Mesial Aspect



Distal Aspect

Some differences between maxillary and mandibular central incisors

Feature	Max. central incisor	Mand. central incisor
Location of the incisal ridge	Centered over the root.	More lingually positioned.
Labial outline (from mesial aspect)	Convex cervically, slightly convex to the incisal ridge.	Slightly convex cervically, straight to the incisal ridge.
Lingual aspect	Featurefull.	Featureless.
Contact areas	More cervically.	More incisally.
Size	Larger.	Smaller.