

PROSTHESIS

COMPLETE DENTURE



LEC 14

Arrangement of Ant. teeth

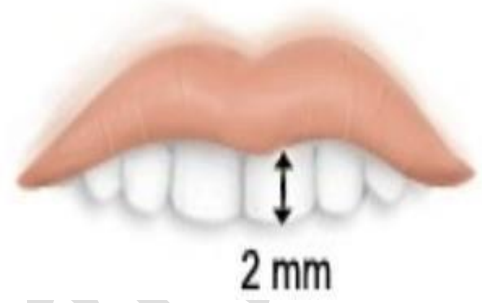
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➤ Objectives

- ✓ Anterior artificial teeth are arranged primarily for esthetics.
- ✓ Permit satisfactory phonetics.
- ✓ Stability.

1) Esthetics

- ✓ Incisal two-thirds of labial surface of supports the lips
- ✓ Angulation and position of maxillary anterior teeth affects lip support
- ❖ Visibility of upper anterior teeth
 - ✓ Incisal edges are visible by 0 to 3 mm below the upper lip at rest depending on lip length , age , sex and lip mobility.
 - ✓ 2-3 mm in female and 1-2 male
 - ✓ 2-3 mm in young and 0-1 in old patient (attrition)
 - ✓ In long lip ---incisal edge made equi-labial
- ❖ Some irregularities frequently present in natural teeth, these may be reproduced to improve esthetics
- ❖ In frontal view The most appear tooth is central incisor then 7/8 from the lateral appear then 2/3 from canine then 1/3 first premolar then 1/4 second premolar then 1/8 of molars (esthetic zone is from second premolar to the other second premolar)
- ❖ The buccal corridor (black triangular) should not obliterated and must appear bilateral between the posterior teeth and the cheek .



2) Phonetics

- ✓ Speech is affected by the position of anterior teeth
- ✓ Labio-dental sound (V, F) in these found the upper incisor must touch lower lip in the junction of dry and moist part of the lip
- ✓ If touch in dry part----- mean that the teeth arranged more buccally
- ✓ If space between the incisor and lip during V, F must increase the length of the teeth
- ✓ If lip everted----- decrease the length of wax
- ✓ Also S sound affect horizontal relation between upper and lower (over jet) if decreased or increased affect the S sound (wistling or lisping)

3) Incision

- ✓ The relation of anterior teeth to the edentulous ridge is important for stability of the denture in the mouth
- ✓ Stability is more complex in lower –so teeth must be on the crest of the ridge to prevent lever and displacement of the denture

➤ General guidelines involved in arrangement of anterior teeth

❖ Pre extraction guides:

a) Casts

b) Photographs.

c) Radiographs.

❖ Post extraction guides:

- Antero-posterior-position : how far labially or lingually (in or out) the anterior teeth are located.
- Superior inferior position : Above/ below plane of occlusion .
- Medio-lateral position. How far mesially or distally the anterior teeth are located.
- Rotation on a long axis: Turning tooth on its center axis
- Inclination of teeth :mesio-distal , labio-lingual
- Relation between maxillary and mandibular anterior teeth.

Antero-posterior Position

- ✓ Esthetic -----Fullness of the lip
- ✓ Phonetic: Libiodental sounds, Sibilant sounds
- ✓ Distance from the incisive papilla 8-10 mm from the labial surface of the teeth till the distal part of incisive papilla but not exceed inner part of the land area to provide stability with no interference with the lip support
- ✓ Pattern of bone resorption :in maxilla directed labially and vertically , in mandible lingually and vertical
- ✓ Relation to the residual alveolar ridge : Mandibular anterior teeth must be placed on the crest of the ridge.



Superior inferior position

- ✓ Esthetic
 - Visibility of upper anterior teeth
 - Proper placement of the occlusal plane according to upper lip length. lip mobility . age and sex.
- ✓ High lip line
 - Highest point of upper lip when smiling
 - Cervical necks lie at or above this line
 - If shorter teeth are selected, esthetics compromised
- ✓ Phonetic
 - Maxillary anterior teeth are arranged according to phonetics.
 - Libiodental sounds (V,F)



Fig. 2

✓ Relationship of lower lip to lower anterior teeth

- Lower canine & 1st premolar should be even with lower lip at the corner of mouth
- The lower level of the lower occlusal plane the more preferable to improve stability (not exceed 2/3 retro-molar pad)

Medio-lateral position.

✓ Midline

- Center of face if not symmetrical -- on cast with median palatine raphe
- On patient from labial frenum

✓ Canine lines

- From the angle of the mouth (distal of canine) ---- width of 6 anterior
- line from nostril or ala of the nose----- in the center of canine

✓ Cuspid eminence

- When cuspid eminences are visible on cast, a line marking the distal of eminences co-incide with distal margin of cuspids.

✓ Distal Aspect of the Incisive Papilla:

- Line passing through distal border of incisive papilla Perpendicular to the palatal midline intersects cusp tips of the canines.

Rotation on a long axis

✓ Arch form

- Square arch-- central incisor in line with the canine
- Tapering arch-- central incisor at a greater distance forward than canine
- Ovoid arch -- in between

Inclination of teeth

✓ Labial plate

- The roots of the teeth are parallel to the labial plate of bone.

Relation between maxillary and mandibular anterior teeth

- ✓ Overjet : horizontal distance between labial surface of lower incisor and palatal surface of upper incisor normally 1-2 mm
- ✓ Overbite : vertical distance between incisal of the upper and lower incisor normally 0-1
- ✓ We make this overlap to increase stability by decrease incisal angle and decrease bone resorption due to decrease force and for proper S sound

Individual arrangement of anterior teeth

Maxillary Anteriors

❖ Maxillary central incisor

➤ Facial view

- ✓ The long axis shows a slight distal Inclination of the neck. the incisal edge is in contact with the occlusal plane.

➤ Proximal view

- ✓ The neck of the tooth should be slightly depressed when viewed from this side, the tooth slopes (incisal edge) towards the labial side.

➤ Incisal view

- ✓ Incisal edge with the curve of the arch according to the arch form.

❖ Maxillary lateral incisor

➤ Facial view

- ✓ The long axis is inclined more distally from the neck than central incisor . The incisal edge is 0.5 to 1 mm above the occlusal plane.

➤ Proximal view

- ✓ The neck is depressed more than the central incisor, although the labial surface will be nearly in line with the incisor.

❖ Maxillary canine

➤ Facial view

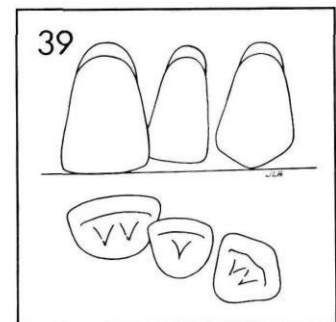
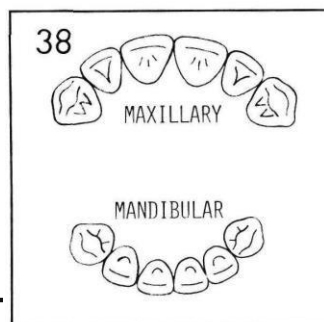
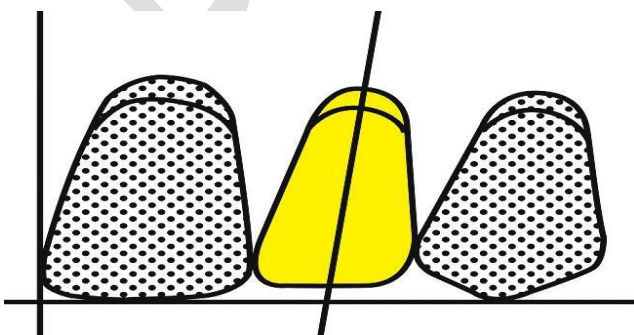
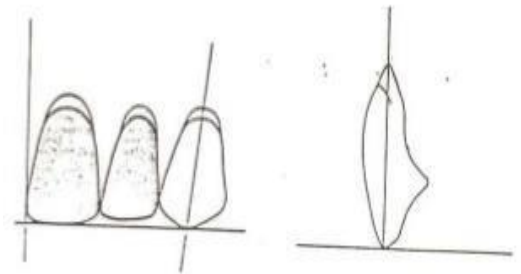
- ✓ The neck of the maxillary canine is prominent.
- ✓ The cusp tip is in contact with the occlusal plane

➤ Proximal view

- ✓ The long axis is vertical or has slight distal inclination

➤ Incisal view

- ✓ The mesial plane should follow the contour of the incisor while the distal plan will be in line with posterior teeth



Mandibular Anteriors

❖ Central incisor

➤ Facial view

- ✓ The long axis is perpendicular to the occlusal plane (vertically upright).
- ✓ The incisal edge is with the level of the occlusal plane.

➤ Proximal view

- ✓ Neck is slightly depressed
- ✓ The lower central should be tipped slightly to the labial

❖ Lateral incisor

➤ Facial view

- ✓ The mandibular lateral incisor is placed with its long axis showing a slight distal inclination from the neck.
- ✓ The incisal edge is above the level of the occlusal plane by 0.5 to 1 mm

➤ Proximal view

- ✓ Neck is slightly depressed .
- ✓ The lower laterals should be tipped slightly to the labial

❖ Canine

➤ Facial view

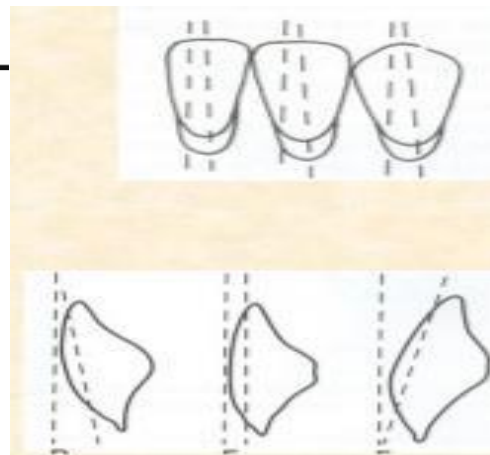
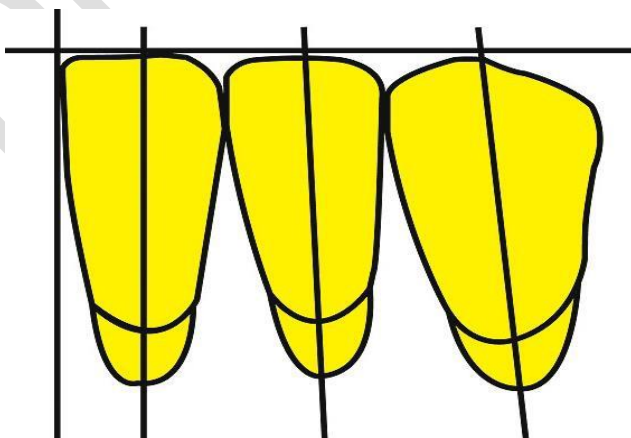
- ✓ The mandibular canines are placed with a more distal inclination from the neck than the mandibular lateral incisors . cusp tip is with the level of the occlusal plane

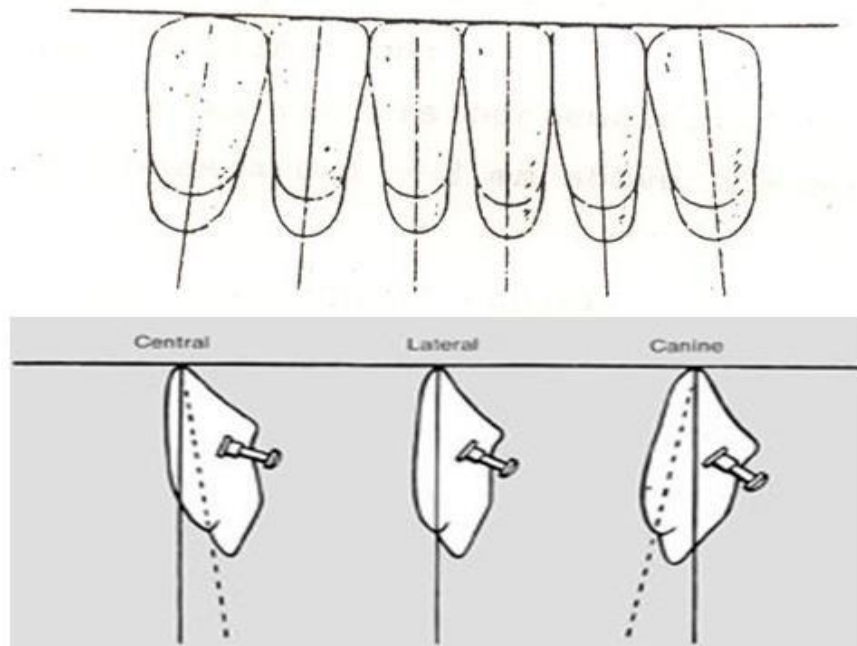
➤ Proximal view

- ✓ The neck of the tooth is placed prominently. The tooth shows a slight lingual inclination (at the incisal part) when viewed from the side

➤ Incisal view

- ✓ Mesial plane will follow the contour of the incisor teeth while the distal plane will follow the posterior teeth





➤ Dentist Sets Incisal Guidance Overjet & Overbite

- Avoid too much overbite or too little overjet
- Increasing overbite steepens the angle separating posterior teeth more quickly
- Increasing overjet shallows the angle separating the posterior teeth less quickly
- Monoplane teeth and normal setting and lingualized occlusion make overjet 2 mm and zero overbite

