OCCLUSION IN ORTHODONTICS

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OUTLINE

• History
• Terminology
• Occlusion – definition
• Angle’s Classification
• Andrew’s Six Keys to Occlusion
• Clinical Scenarios
History

• Dr. Edward H. Angle
• First dental specialty: Orthodontics
Terminology
Orientations

Buccal

Lingual

Mesial

Distal
Overjet

Overbite

Curve of Wilson

Transverse Occlusal Deviations

- Edge-to-edge-bite
- Buccal nonoclusion
- Normal transverse occlusion
- Cross-bite
- Lingual nonoclusion

Midline Deviation

Deviations of the midline

- Maxilla
- Mandible
- Combined forms

- Dentoalveolar
- Skeletal
- Combined forms

Midline Deviation

Midline Deviation

Functional Shift

Curve of Spee

Curve of spee is 3.5 mm
OCCLUSION
"The relationship of the mandibular and maxillary teeth as they are brought into functional contact"
COMPLEXITY OF OCCLUSION

- Teeth (morphology and angulation)
- Masticatory muscles
- Skeletal structures
- Temporomandibular joints
- Functional jaw movements
Mesio buccal cusp of maxillary first molar rests on the buccal groove of the mandibular first molar.
CLASS II

Class II Division I

Class II Division II

CANINE CLASSIFICATION

A. Class I - Maxillary canine fits in the embrasure between the mandibular canine and first premolar

B. Class II - Maxillary canine occludes mesial to Class I

C. Class III - Maxillary canine occludes distal to Class I
ANDREW’S SIX KEYS OF NORMAL OCCLUSION
SIX KEYS OF NORMAL OCCLUSION

• Molar interarch relationship

• Mesiodistal crown angulation

• Labiolingual crown inclination

• Rotations

• Tight contacts

• Occlusal plane (curve of spee)
MOLAR INTERARCH RELATIONSHIP

• Mesiobuccal cusp of maxillary first molar occludes in the buccal groove of mandibular first molar

• Mesiolingual cusps of the maxillary first molar occludes in the central fossa of the mandibular first molar

• Distal marginal ridge of the maxillary first molar occludes with the mesial marginal ridge of the mandibular second molar
MOLAR INTERARCH RELATIONSHIP

MOLAR INTERARCH RELATIONSHIP

MESIODISTAL CROWN ANGULATION

Gingival part of the long axis of the crown must be distal to the occlusal part of the axis

LABIOLINGUAL CROWN INCLINATION BETWEEN MAXILLARY AND MANDIBULAR INCISORS

LABIOLINGUAL CROWN INCLINATION OF POSTERIOR TEETH

NO ROTATIONS
TIGHT CONTACTS – NO SPACING

CURVE OF SPEE

A. Excessive

B. Normal

C. Reverse

REFERENCES


CLINICAL SCENARIOS