

Orthodontics

Anomalies

Anomalies

of

Teeth

Groups of teeth

Jaws

Intermaxillary relationships

Anomalies of tooth number

- Hypodontics (hypodontia)
- Hyperodontics (hyperodontia)
- Anodontics (anodontia)

Third molars, lateral incisors, premolars (2nd)

Anomalies of tooth size (dimension)

- Microdontics (microdontia)
- Macrodontics (macrodontia)

Anomalous tooth form

- Dentes confusi, concreti, geminati

Cone teeth

Anomalies of tooth position

- Inclination
- Rotation
- Transposition
- Infraocclusion
- Supraocclusion
- Vestibular, oral eruption
- Diastema

Anomalies of group of teeth

- Compression
- Nonocclusion
- Deep bite
- Open bite
- Retrusion
- Protrusion
- Inverse bite
- Prognatism - overlap

Key of occlusion acc. to Angle

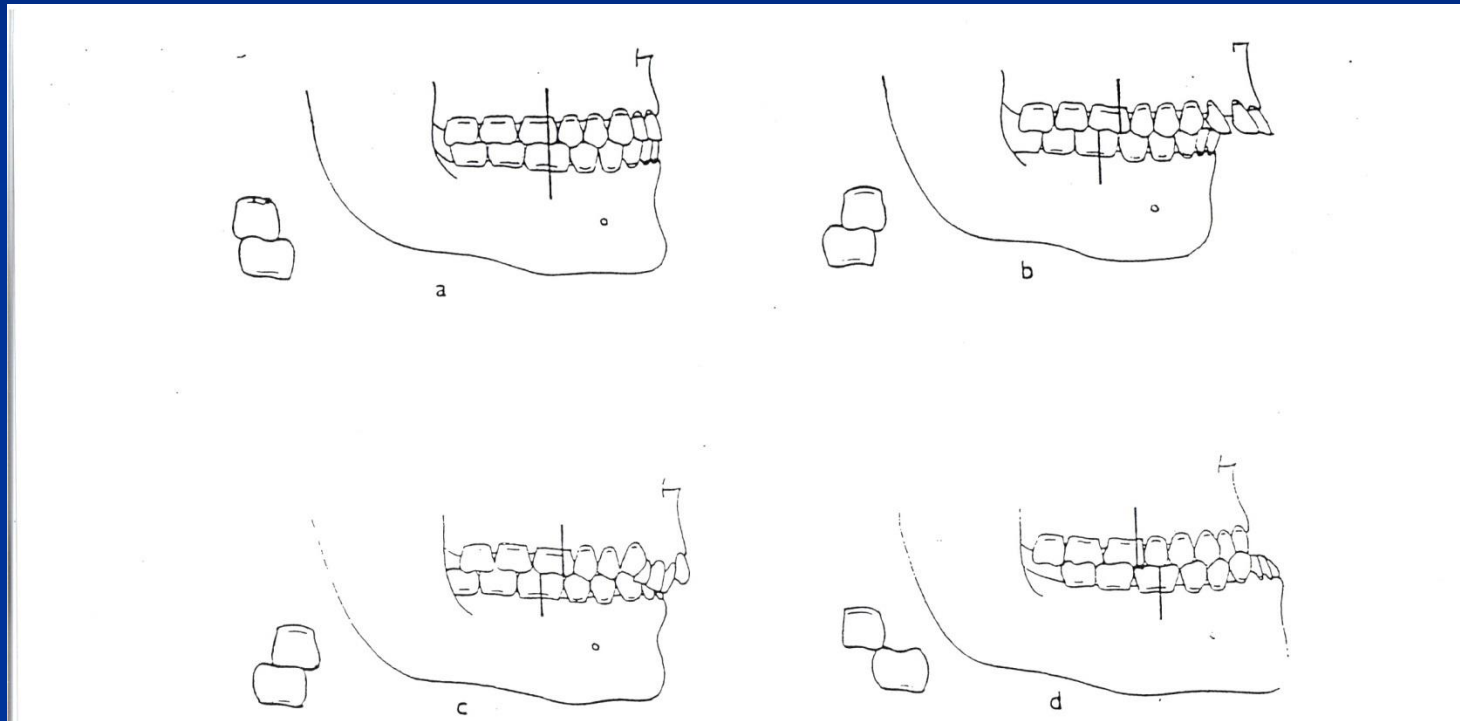
- Normoocclusion:

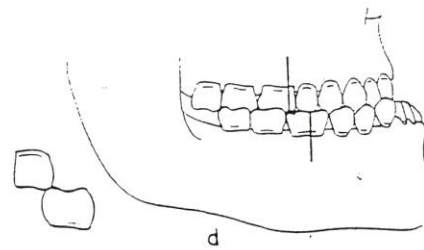
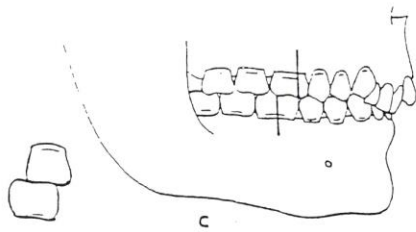
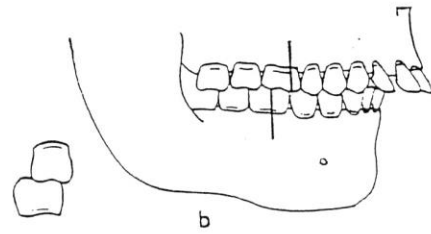
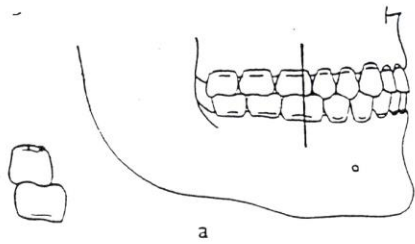
Mesiobuccal cusp of the first maxillary molar goes between mesial cusps of the first mandibular molar.

Key of occlusion acc. to Angle

- Normoocclusion (normoocclusia)
- Distoocclusion – mandible is in posterior position (distoocclusia)
- Mesioocclusion – mandible is in anterior position (mesioocclusia)

Classification acc. to Angle





Angle

Class I

The mesiobuccal cusp of the maxillary first molar lies in the mesiobuccal groove of the mandibular first molar, but the other teeth may have other anomalies such as spacing, crowding, open bite etc.



Angle

- **Class II**
- Is also called distocclusion, or mandibular retrognathism
- The mesiobuccal cusp of the upper molar is situated anterior to the mesiobuccal groove
- Two subdivisions exist:
- Division 1 (II/1) --> Anterior teeth protrude, increased overjet
- Class II/1



Class II/1



Class II/2

- Class III
- Is also called Mandibular Prognathism
- The mesiobuccal cusp of the upper molar lies posterior to the mesiobuccal groove of the first mandibular molar



Class III

Overjet

- Is the distance between the tip of the upper and the tip of the lower incisors in the horizontal plane
- The normal distance is ~ 1.5-2.5 mm
- We distinguish two types of overjet:
- Positive overjet --> Distance >2.5 mm
- Negative overjet (anterior cross bite) --> Distance <1.5 mm

Overbite

- Normally the upper centrals should cover between $1/3$ - $1/4$ of the anterior surface of the lower centrals
- Any disturbance in this coverage can result in:
 - Open Bite
 - Deep Bite

Scissor Bite

- Is a rather rare orthodontic malocclusion, where the palatal surface of the upper molars rest laterally from the buccal surface of the mandibular molars



Midline Deviation

- Occurs when the midline of the upper jaw doesn't coincide with that of the lower jaw



Posterior Cross Bite

- In this malocclusion the buccal cusps of the upper molars lie in the opposing central fossa of the mandibular molars (in physiological conditions the **palatal cusps** of the upper molars lie in the opposing central fossa)



- Crowding

Is the result of lack of space in the dental arch

- Spacing

Is the result of excess of space in the dental arch

- Wide interdental spaces

Diastema

Space between the two central incisors

- Rotation

- The tooth is rotated in the longitudinal axis

Reasons

- Genetic factors
- Loss of primary teeth
- Persistency of primary teeth
- Insufficient function of masticatory apparatus
- Parafunctions (sucking of thumb, dummy, put the lip between teeth etc.)

Prevention

- Natural food admission (nursing, later chewing)
- Care for primary dentition
- Avoid parafunction

Therapy

Orthodontic appliances

- Passive (functional – always removable)

Enable the change of position of jaws and teeth through the function.

- Active

Affect active forces on teeth- removable, fixed)

- Removable

- Fixed (brackets, wire)



wire

bracket

ring



elastic pull