First classification of malocclusion : skeletal (A-P, vertical ,transverse)/soft tissue /habit /dental and local factor

***1 )A-P points***

A :deepest concavity on maxilla B: deepest point on mandible

Patient should be at natural head position or Frankfort plan should be parallel to the floor

Values : A pointshould be ant to b point 2-3 mm ( class 1 ), >2-3 ( class 2 ) , < 2-3 ( class 3)

**Convexity of the face :**

glabella: most prominent part of the face and head

subnasal :point where nose meets upper lip

pogonion : prominantpoint of the chin

values : straight points :class 1 , convex face : class2 , concave face :class 3

**class 2 causes** :mandible retrusion (main ),max. protrusion ,max.teeth more proclined ,ant growth rotation

cranial base angle influncesthe position of mandible (ant growth rotation ,post growth rotaion )

**class 3 causes :**mandibular protrusion , max.retrusion ,ant growth rotation

***2)verticle relationship***

Take the readings from side view

**Lower facial height**

faces divided into 3 thirds from( hair line-glabella –sub nasal –menton ), the lower third from subnasal and menton also divided into:

upper lip height (from subnasal to the opening of the lip ),lower lip height (opening of the lip to the menton )

**Frankfort-mandibl plan angle**

Normally meet at the occipt bone (28 degree)if ant to it(increase lower facial height- angle > 28 )

If post to it (decrease lower facial heigh- angle <28 )

Ant open bite due to :habit, skeletal (post growth rotation ),soft tissue, localized failure of eruption

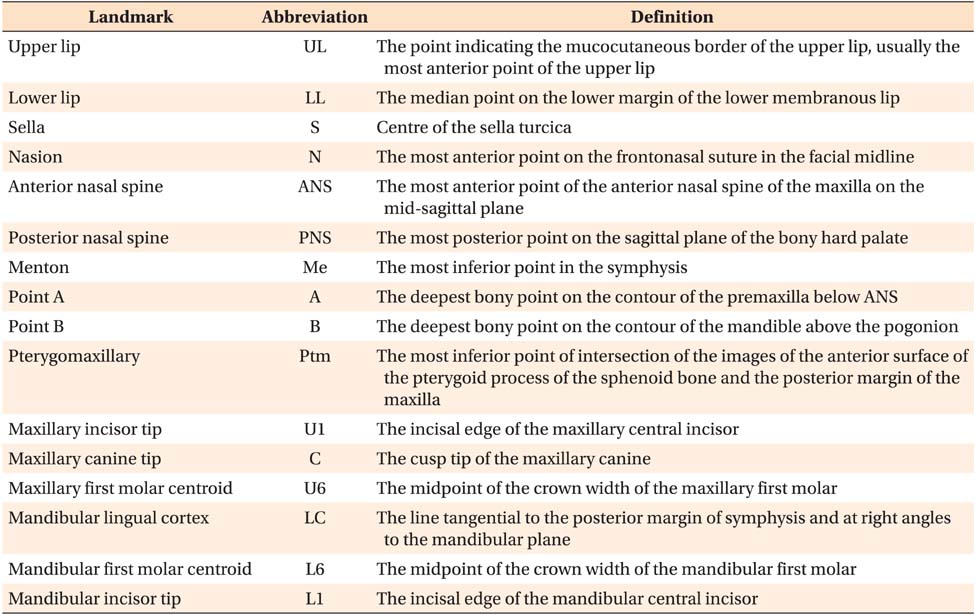
***3)transverse*** : u have to take the readings infront of patient or above

Transvers( asymmetry of the face) oral manifestations

1. Cross bite: lower posterior teeth buccal than upper
2. Scissor bite: upper post more buccalythan lower

Most important words that describe transverse stage ( u have to determine if its ant or post /uni or bilateral /with or without displasment )

CEPHLOMETRY



Type ofskull xray :

Frontal (AP) view.
• OML should e vertical.
• PA with 20 degree caudal tilting.
• Center on the inion.
 

Basal (PA) view:
• Hyperextension of he head.
• Anatomical base line horizontal.
• Center vertical to it & between angles ...Towne’s view:
• AP with 30 degree caudal tilting.
 

ROLES OF SOFTTISSUE IN MALOCCLUSION (worse-help-cause the malocclusion-increase the stability )

Equilibrium theory :natural zone affected by many forces

1)intrinsic forces : lip, cheeks, tongue 2)extrinsic by habits 3)occlusal forces ( important\*\*\*)especially ant component of the force 4)pdl tissue

**1)lip**

**Lip at rest : (contour –lip line –competence )**

1)contour :everted🡪 decrease the activity of the lip 🡪 proclined teeth والعكس صحيح

2) lip competence 🡪 if incompetent lip🡪 mouth breather

3)lip line🡪lower lip covers 1/3 upper incisor (if <1/3🡪 low lip line🡪 retroclined teeth ) العكس صحيح

**At function (ant oral seal- activity of thelower lip )**

1)ant-oral seal (lipto lip )

Swallowing pattern **(infantile pattern :lower lip with ant part of the tongue),**

**(adult pattern :teeth come to occlusion , lips together,posterior part of the tongue)**

How to achieve the seal  **: circumoral** muscular activity , forward mandibular positioning ,tongueto lowerlip seal

1. Lower lip activity (hyperactive lower lip🡪 retroclined lower teeth )

**2)Tongue**

Tongue at rest most important than at function

At rest ( size and position ) at function (adapted tongue and 1ry endogenous )

**3)Pdl**

Is a stabilization factor that balance the forces between the tongue and lip

**Digit sucking :** a symmetrical ,localized to ant teeth ,upper teeth proclined

**Adenoid :** over eruption of teeh , increase lower facial height m mandible will move downward and backward

Roles of soft tissue in malocclusion

1)To reah the stability in class 2 div 1 u hav to reach : lip to lip –and stop habits

2)In class 3 the soft tissue will decrease the severity of malocclusion

3)Hyperactive lip +low lip line = class 2 div1

4)Hyperactive;ip + high lip line = class2 div 2

5)How to dx high labial frenum attachment ? 1.blanching test 2.PA radiograph

6)cleft after surgerythe fibrous tissue will grow and prevent the maxilla from continuing its growth

**ETIOLOGY OF MALOCUSION** skeletal –soft-localized(variation of number,size and position)

**1)Variation of number (supernumerary –hypodontia- early loss of primary )**

**Supernumerary :**

Conical : small ,cause spacing ,not preventeruption of teeth

Tuberculate :prevent teeth eruption , diagnosed by occlusal radiograph or OPG

Supplemental :normal shape of tooth

Odontom :it might becompound or complex

**hYpodontia**

eg .of interceptive tx when dentist noticed that lat incisor is missing :

early extraction of B ,C so 3 can easily erupt

when u have unilateral missing lateral inciso🡪 on the other side u will have peg shaped lat .incisor

* Result of missing centralsincisor :midline shift ,increase oj,mesial drifting for molars
* Early loss of D :will affect molar relationship and causes minimally midline shift
* Early loss ofE:6 driffting and causing 5 impaction
* Type of extractions :
* 1)compensating :extraction of the opposite arch to maintain molars relationship
* 2) balancing : extractin in the same jawbut R and L TO prevent midline shift

\*Most common cause for preventing eruption : tuberculate >odontom >rare conical \*Always when 1ry teeth are missing the permanent is missing too

\*When permanent is missing🡪 primary might be infra occluded

\*Infraoccluded teeth in the cases of 1) missing 4,5 2)1ry teeth ankylosed to the bone

\*Clinical signs that indicates exiting of supernumerary teeth 1) existanceof extra tooth 2)delay in permanent teeth eruption 3) median diastema 4) asymmetry of eruption

\*hypodontia usually associated with microdontia