

Orthodontic treatment

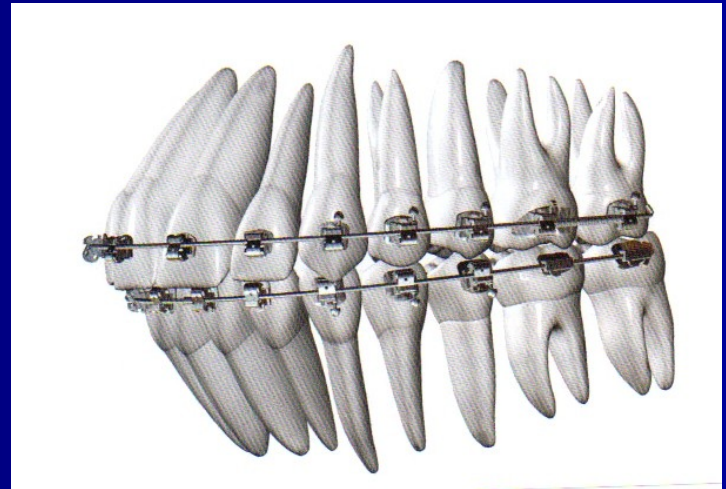
MALOCCLUSION is a manifestation of genetic and environmental interaction on the development of the orofacial region

GOALS OF TREATMENT:

- Ideal functional occlusion
- Ideal soft tissue proportions and adaptation
- Ideal jaw, skeletal and dental relationship

Ideal occlusion

- correct relationship of molars
- correct overjet and overbite
- correct angulation, inclination of teeth
- no rotated teeth
- no spacing
- flat plane of occlusion



Objectives of orthodontic treatment

- Aesthetics
- Treatment of impacted teeth
- Prevention of dental injuries
- Before prosthetic treatment
- Decay prevention
- Prevention and treatment of chewing malfunction and jaw joint disorders

Methods of orthodontic treatment

- Orthodontics movement of teeth
- Orthopedic movement – effects of growth
- Myofunctional therapy
- Serial extraction, controlled extraction
- Ortho – prosthetic treatment
- Ortho – surgical treatment

Orthodontic treatment

1. Orthodontic treatment by infants

- clefts
- syndromes and defects that complicate nutrition and breathing

We use - individual removable plates

Orthodontic treatment

2. Deciduous teeth

We treat - bite defects

inverted bite

cross bite

- bad habits

We use – removable appliances



Orthodontic treatment

3. 6-9 years [1. phase of mixed dentition]

The best time for treatment :

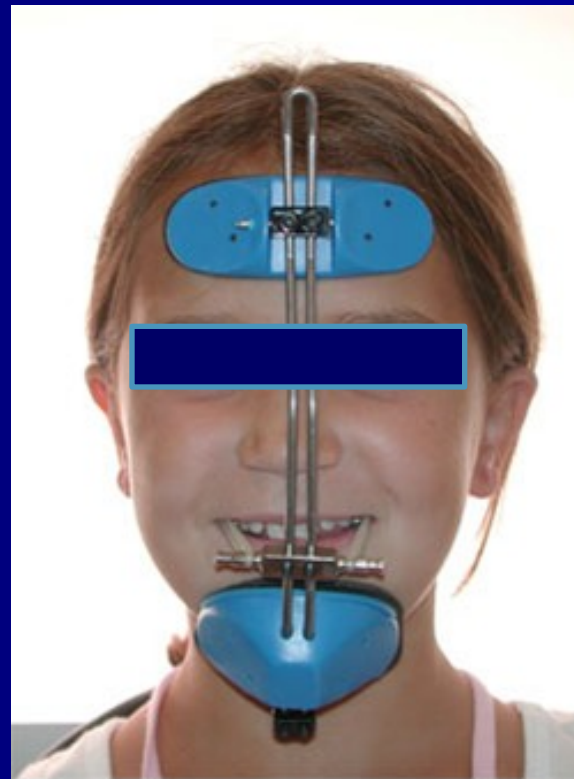
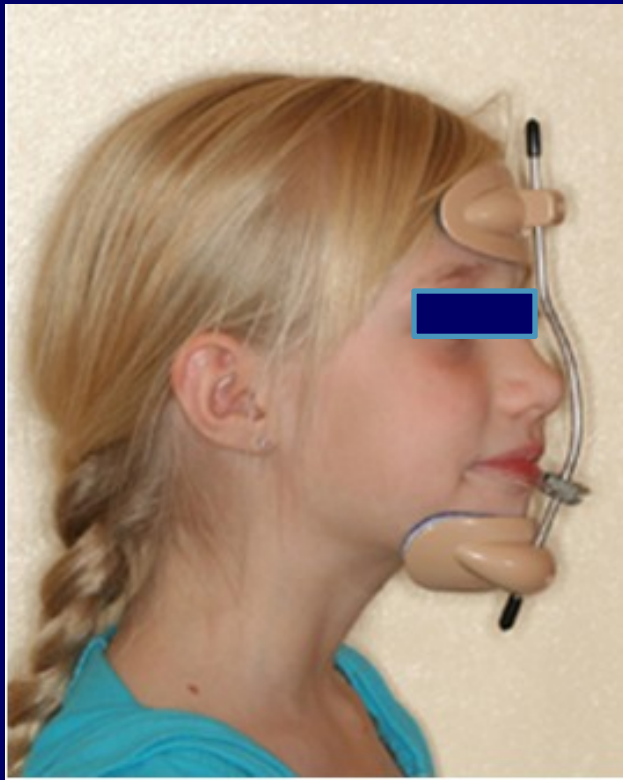
- cross bite
- inverted bite
- impacted incisors
- diastema more than 3 mm
- big primary crowding

We use : removable appliances

small fixed appliances

face mask for inverted bite by class III

Face mask



Orthodontic treatment

4. 9-12 year [second phase of mixed dentition]

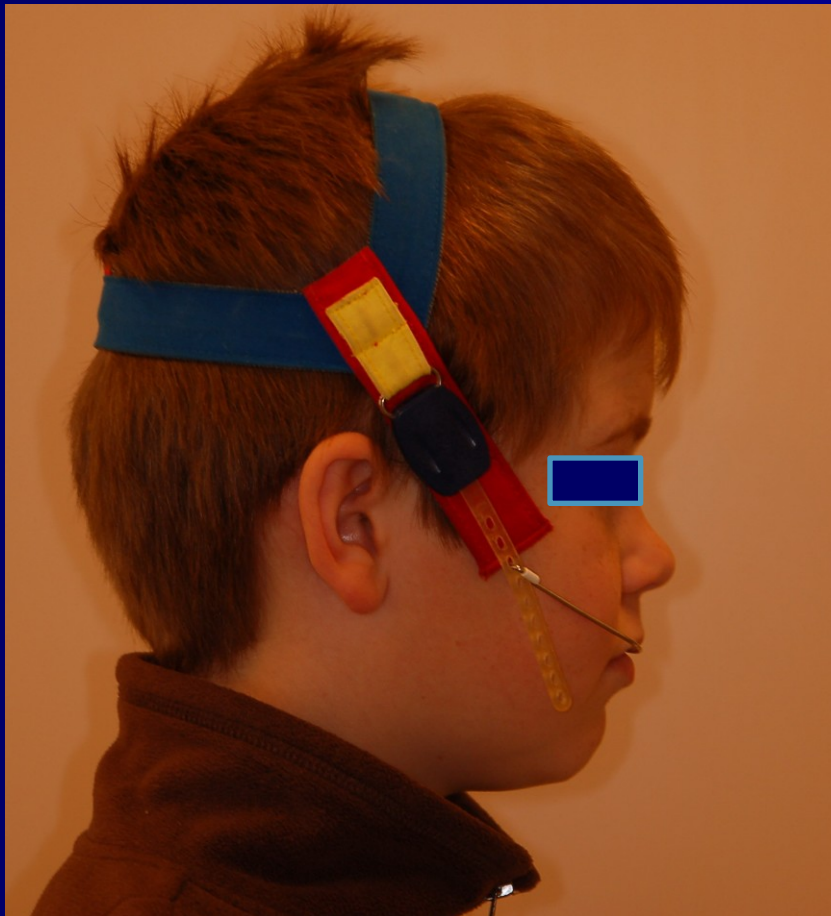
- Large forming ability of the tissues
- We can use and influence the growth
- Growth mandible from the joints

- We treat:
- previous untreated anomalies
 - crowding
 - Angle class II – div. 1 and 2
 - overjet more than 5 mm
 - deep bite
 - movements teeth after the early loss of teeth and anodontia
 - Controlled tooth eruption
 - Suspected retention of canines, premolars

The best time for functional appliances

- removable appliances
- Small fixed appliances
- Headgear appliance

headgear



Orthodontic treatment

■ 5. Permanent teeth

We treat:

- All anomalies, previous untreated anomalies,
- Angle class III
- Crowding
- Open bite, deep bite
- Impacted tooth
- Skeletal anomalies

Adult therapy – periodontics problems, preprosthetic therapy

- problems with TMJ
- bruxism

We use : fixed appliances

extraction

surgical treatment by big skeletal anomalies

Othodontic treatment

- Removable appliances:
 1. Active
 2. Passive
 3. Functional

Therapy of ortodontical anomalies

- **Conservativ**
- orthodontical appliances :
 - removable
 - fixed
- **Surgical**
- extraction of teeth
- surgical expositions of crowns of retined tooth
- surgical movements of maxila, mandible

■ Active removable appliances

- Treatment of anomalous position of teeth [inclination, rotation of incisors]
- Treatment the dental arch shape
- Individual resin plates
- Active elements : springs, screws, wire bows

Removable active appliances



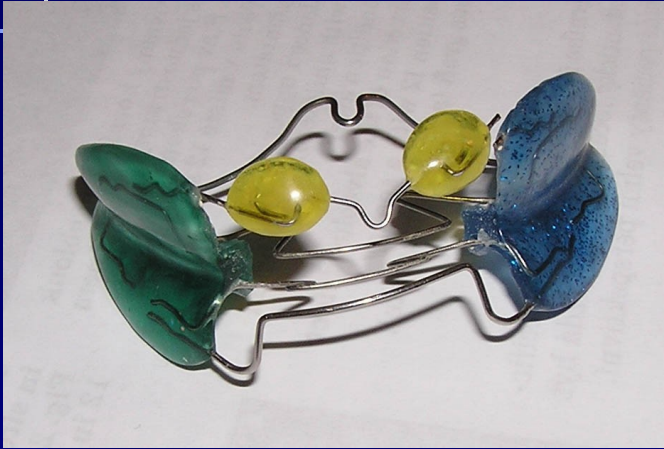
Removable appliances - active



Functional appliances

- modifying extent and direction of orofacial growth
- exploit muscular activity and soft tissue stretch to stimulate dental and bone changes
- operates at the time of maximum growth of orofacial region = 9-12 years old children
- We need **construction bite**
- Type of functional appliances :
 - Bionator, Klampt, Maxilator – class II and open bite
 - Fränkel appliance – class III

Removable functional appliances



Functional appliances-Maxilator



Functional appliances – Frankel



Functional appliances - Klampt



Functional appliances - Bionator

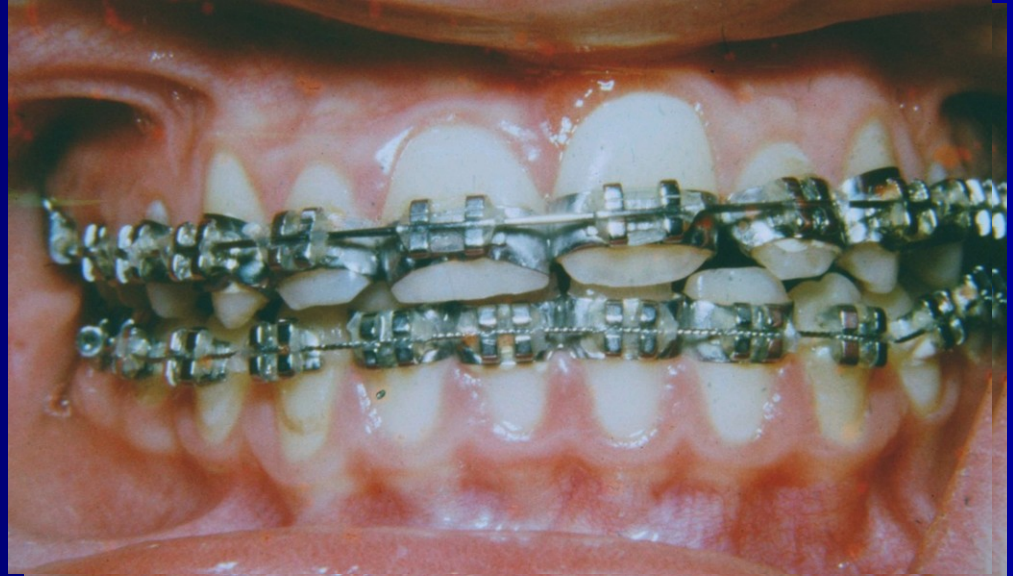


Removable appliances- passive



Fixed appliances

-History



Orthodontics brackets

Stainless steel brackets



Advantages

- strong, do not crack
- smooth, low profile
- recyclable
- low friction
- price

Disadvantages:

- Aesthetic



Stainless steel brackets



Orthodontics brackets

Ceramic brackets



Advantages:

- Aesthetics

Disadvantages:

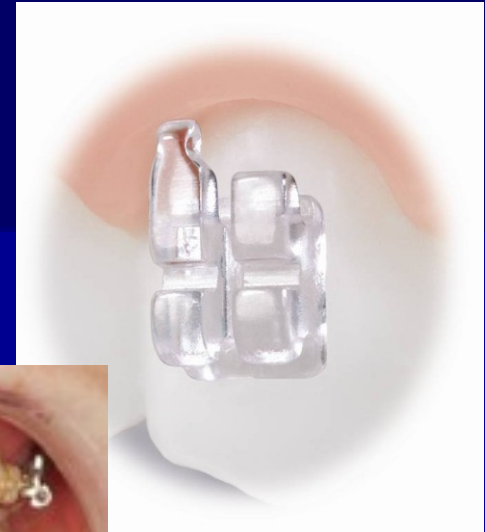
- repeated bonding problem
- robust
- crack
- higher friction (avoid metal slot)
- price

Ceramic brackets



Orthodontics brackets

Sapphire brackets



Advantages

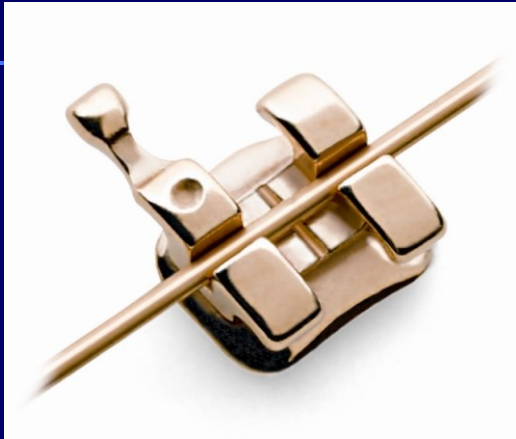
- aesthetic

Disadvantages:

- repeated bonding problem
- robust
- crack
- higher friction (avoid metal slot)
- price

Orthodontics brackets

Gold-coated brackets



Advantages:

- suitable for allergy sufferers
 - strong, do not crack
 - smooth, low profile
 - recyclable
 - Low friction
 - Aesthetics

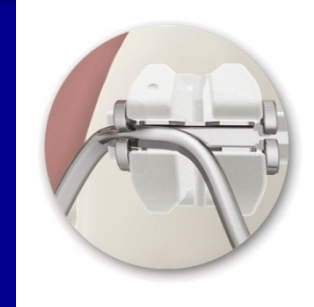
Disadvantages:

- price



Orthodontics brackets

Selfligating brackets – metal and ceramic



Advantages:

- minimum friction
- low power
- faster treatment
- Fewer office visits

Disadvantages:

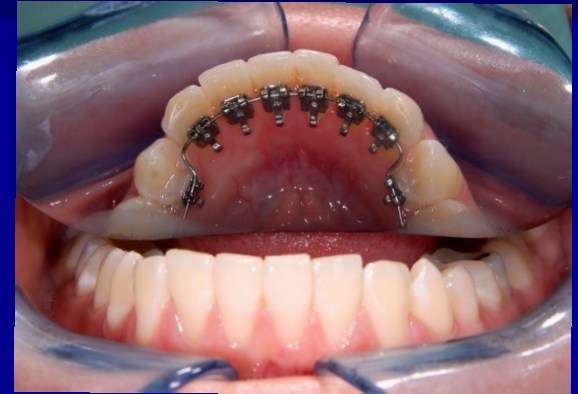
- not suitable for all types of defects

Selfligating stainless steel brackets



Orthodontics brackets

Lingual brackets – 2D,3D



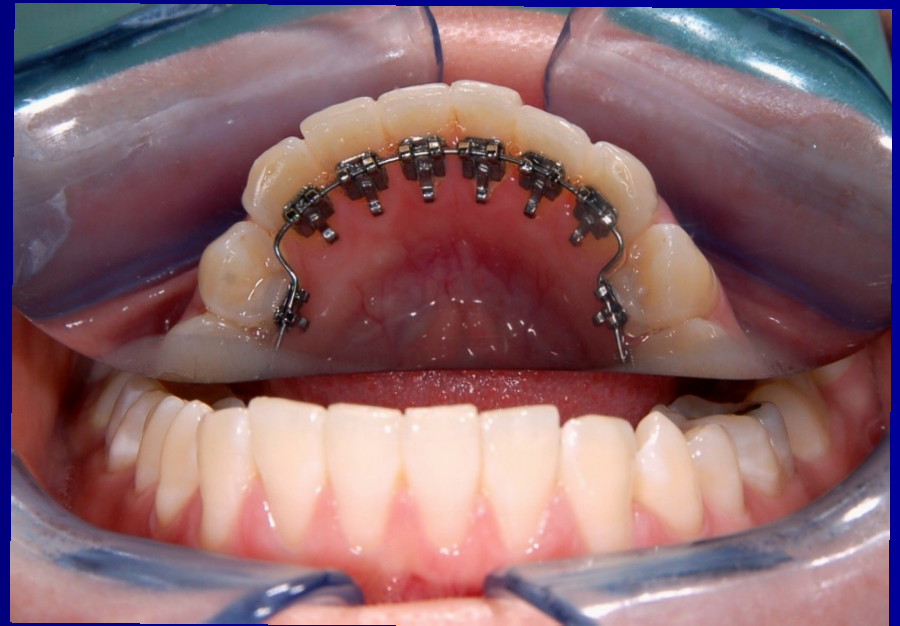
Advantages:

- Aesthetics

Disadvantages:

- unsuitable for all types of defects
- Difficulty hygiene
- (patient discomfort)

Lingual bracket

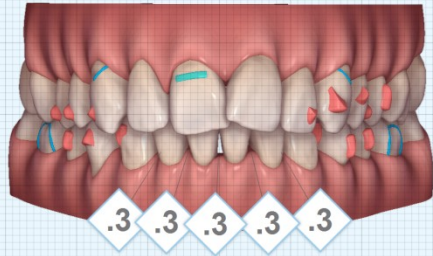




Orthodontics brackets

Decorative brackets





ClinCheck® Software

Simplified Tooth movements; actual treatment results may vary.
Treatment plan are determined by your doctor.



Fixed lingual retainer



Direct bonding

1. cleaning



2. etching



3. rinse



4. drying



Direct bonding

5. primer



6. bonding



7. remove excess



8. light or chemically cured



Indirect bonding



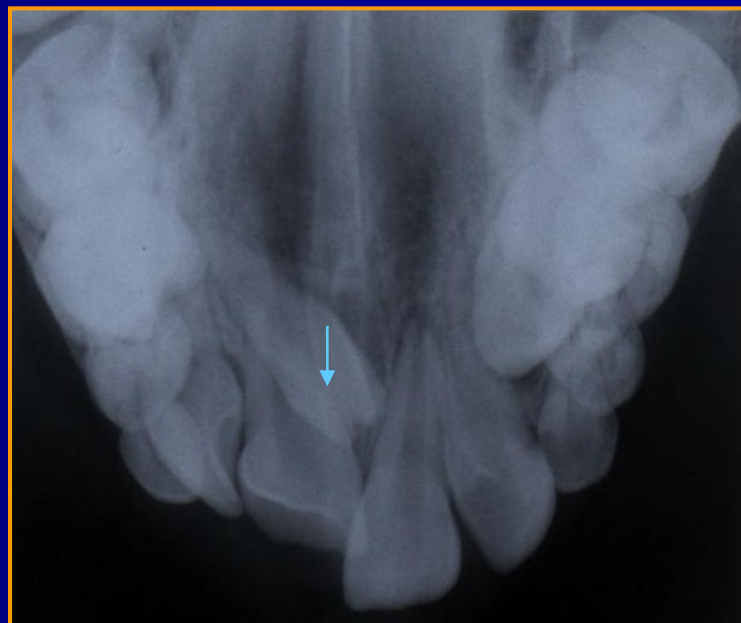
Case 1 : vestibular eruption 11, crowding,
supernumerary 11



Case 1 : vestibular eruption 11, crowding,
supernumerary 11



Case 1 : vestibular eruption 11, crowding, supernumerary 11



Case 1 : vestibular eruption 11, crowding, supernumerary 11 -
Treatment



Case 1 : vestibular eruption 11, crowding,
supernumerary 11 - Treatment



- Treatment time – 11 months

Case 2 : retention 11,21 , crowding, supernumerary 11, 21



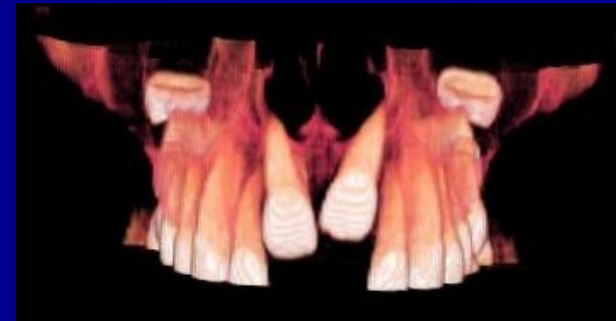
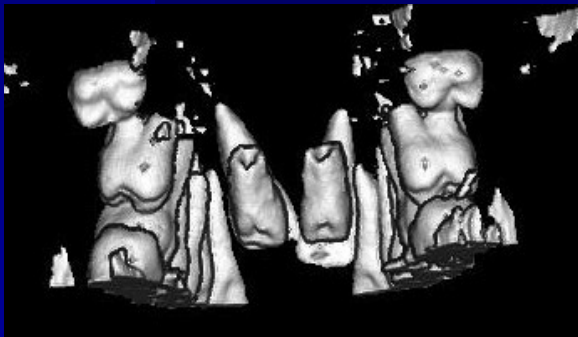
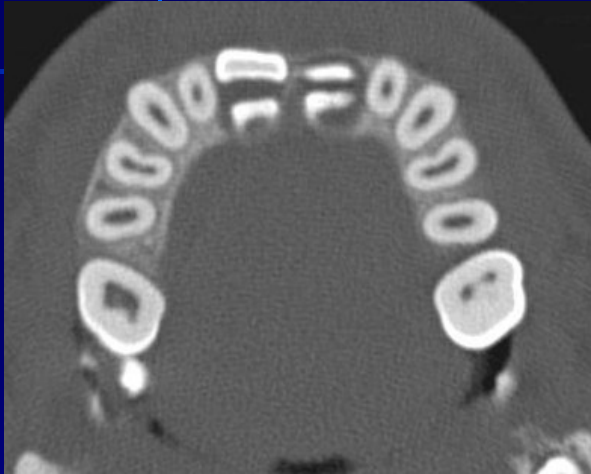
Case 2 : retention 11,21 , crowding, supernumerary 11, 21



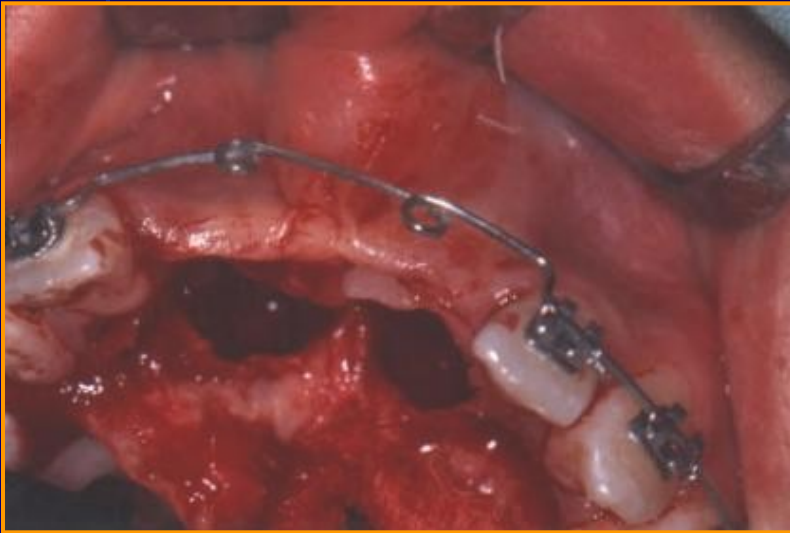
Case 2 : retention 11,21 , crowding, supernumerary 11, 21



Case 2 : retention 11,21 , crowding, supernumerary 11, 21
CBCT



Case 2 : retention 11,21 , crowding, supernumerary 11, 21
Treatment - Extraction of the supernumerary 11,12



Case 2 : retention 11,21 , crowding, supernumerary 11, 21
Treatment



Case 2 : retention 11,21 , crowding, supernumerary 11, 21
Treatment



Case 2 : retention 11,21 , crowding, supernumerary 11, 21
After Treatment



Case 2 : retention 11,21 , crowding, supernumerary 11, 21



- Treatment time 16 months

Case 3 : Crowding, deep bite



Case 3 : Crowding, deep bite
After Treatment with a fixed orthodontic appliance



Treatment time – 1,5 years

Case 4 : Crowding, inverted bite, vestibular eruption 13



Case 4 : Crowding, inverted bite, vestibular eruption 13
Treatment – fixed appliance - expansion, leveling, bite correction



Treatment time – 1,8 years

Case 5 : retention 25, no space for 25 eruption
Treatment – fixed appliance - expansion, open space for 25
leveling



Case 5 : retention 25, no space for 25 eruption
Treatment – fixed appliance - expansion, open space for
25 leveling



Treatment time – 2 years

Case 6 : retention 23, no space for 23 eruption, crowding
Treatment – fixed appliance - expansion, open space for 23, leveling



Treatment time – 2 years

Case 7 : retention 13,23, no space for 13,23 eruption, crowding
Treatment – fixed appliance – extraction 14,24,34 44, leveling, bite correction



Treatment time – 2 years

Orthodontic – surgery treatment - by skeletal Class III. case

Before treatment



After treatment



Lingual appliance 2D – crowding treatment

