ORTHODONTIC TREATMENT DURING ADOLESCENCE

WHY NOW?

ADOLESCENCE
PERMANENT DENTITION
APPEARANCE
SCIENTIFIC & CLINICAL REASONS
COMPREHENSIVE TREATMENT

CLASS II DIVISION 1
- Distoclusion of molars
- Class II canine relationship
- Proclined maxillary incisors
- Crowding and/or Spacing
- Moderate/severe overjet
- Overbite
  - normal
  - deep
  - open
- Crossbite
  - anterior
  - posterior

SCIENTIFIC & CLINICAL REASONS

CLASS II MALOCCLUSION
-mandibular growth spurt

PALATAL EXPANSION
-sutural expansion

CLASS III MALOCCLUSION
-maxillary protraction

SPACE CONSIDERATIONS
-crowding/ bimaxillary protrusion
LATE TRANSITIONAL DENTITION
-E space (Leeway space)

ADOLESCENT TREATMENT
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From

CHAPTER 18
Pages 491-509

ADOLESCENT TREATMENT

Dynamic, three dimensional biological entity.

MALOCCLUSION
- Sagittal
  - Skeletal
  - Dental
- Vertical
  - Skeletal
  - Dental
- Transverse
  - Skeletal
  - Dental

ORTHODONTIC TREATMENT

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ADOLESCENT TREATMENT

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WHY NOW?
CLASS II DIVISION 1 MALOCCLUSION

PERMANENT DENTITION
- Distocclusion of molars
- Distocclusion of canines
- Moderate overjet
- Deep overbite
- Malalignment of incisors

TREATMENT
- Distalization of molars
- Distalization of canines
- Extrusion of posterior teeth
- Intrusion of anterior teeth
- Alignment of all teeth
- Growth modification

LATE MIXED DENTITION

SAGITTAL
- Distocclusion of molars
- Distocclusion of canines
- Class I canine relationship

TRANSVERSE
- Posterior Crossbite (right)
- Mandibular lateral shift
- Functional mandibular midline deviation (right)

VERTICAL
- Moderate overbite (60%)
CLASS II DIVISION 1 MALOCCLUSION
LATE MIXED DENTITION

Pre-treatment

Post-treatment

CLASS II DIVISION 2 MALOCCLUSION
Sub-division right

-Retroclined maxillary central incisors
-Flared maxillary lateral incisors
-Deep, impinging overbite (>100%)
  - extruded maxillary central incisors
  - marked curve of Spee
-Cusp to cusp right molar relationship
-Cusp to cusp right canine relationship
-Neutrocclusion of left molars
-Class I left canine relationship

CLASS II DIVISION 1 MALOCCLUSION
Treatment with Functional Appliance

Pre-treatment

Post-treatment

CLASS II DIVISION 2 MALOCCLUSION
TREATMENT

-Flare maxillary central incisors incisors
-Intrude maxillary central incisors
-Intrude mandibular incisors
-Extrude maxillary molars
-Extrude mandibular molars
-Distalize maxillary right molar/ relative distalization
-Distalize maxillary right canine
-Angulate all teeth
-Modify dentofacial growth
  -vertical
  -sagittal

DO NOT EXTRACT

CLASS II DIVISION 2 MALOCCLUSION

-Deep, impinging overbite (>100%)
-Extruded maxillary central incisors
-Marked curve of Spee
-Cusp to cusp right molar relationship
-Cusp to cusp right canine relationship
-Neutrocclusion of left molars
-Class I left canine relationship

Pre-treatment

Post-treatment

CLASS II DIVISION 2 MALOCCLUSION

-Deep, impinging overbite (>100%)
-Extruded maxillary central incisors
-Marked curve of Spee
-Cusp to cusp right molar relationship
-Cusp to cusp right canine relationship
-Neutrocclusion of left molars
-Class I left canine relationship

Pre-treatment

Post-treatment
CLASS III MALOCCLUSION

**Pseudo Class III:**
- Class I
  - with mandibular anterior shift due to premature occlusal contacts

**TRUE CLASS III**
- Mesiocclusion of molars
- Class III canine relationship
- Anterior crossbite
- Possible posterior crossbite
- Crowding and/or spacing
- Overbite - normal
  - deep
  - open
  - ANB < 0°

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**CLASS III MALOCCLUSION**

**Non-extraction**

**Pre-treatment**

**Post-treatment**

TREATMENT:
- Rapid maxillary palatal expansion (Hyrax appliance)
- Fixed appliances / intermaxillary mechanics (Class III elastics)

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**CLASS III MALOCCLUSION**

**Non-extraction**

**Pre-treatment**

**Post-treatment**

TREATMENT:
- Rapid maxillary palatal expansion (Hyrax appliance)
- Fixed appliances / intermaxillary mechanics (Class III elastics)

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**CLASS III MALOCCLUSION**

**Non-extraction Treatment**

**Pre-treatment**

**Post-treatment**

TREATMENT:
- Hyrax appliance
- Extraction of four first premolars
- Fixed orthodontic appliances / Class III elastics

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**CLASS III MALOCCLUSION**

**Extraction**

**Pre-treatment**

**Post-treatment**

TREATMENT:
- Hyrax appliance
- Extraction of four first premolars
- Fixed orthodontic appliances / Class III elastics
CLASS III MALOCCLUSION
Severe skeletal
12 years

ANTERIOR OPEN BITE MALOCCLUSION

CLASS III MALOCCLUSION
15 years
Severe skeletal

POST-surgically

CLASS I MALOCCLUSION
severe crowding

TRANVERSE DISCREPANCIES
simple cross-bite

POST-TREATMENT (Surgical and orthodontic)
**TRANSVERSE DISCREPANCIES**

- active rapid palatal expansion
- orthopedic expansion (Haas appliance)
- retention

**DENTAL ANOMALIES**

- canine impaction

**Pre-treatment**

**DENTAL ANOMALIES**

- fractured incisor

**Pre-treatment**

**Post-treatment**