Interceptive orthodontics

Part II
• Serial extraction
• Correction of developing cross bite
• Control of abnormal habits
• Space regaining
• Muscle exercises
• Interception of skeletal mal relation
• Removal of soft tissue or bony barrier to enable eruption of teeth
Posterior cross bite

- Skeletal
- Dental
- Functional
  - Unilateral
  - Bilateral
Treatment procedures

Quad helix
Micro screws
Control of abnormal habits

• Thumb / digit sucking
• Mouth breathing
• Tongue thrusting
• Lip sucking / biting
Treatment procedure

- TONGUE CRIB
- LIP BUMPER
Space regainers

• Mesial tipping or drifting of permanent first molars on premature loss of deciduous second molar, reducing the arch length
• Extensive caries
• Ecotopic eruption
• Premature extraction of primary molars
Timing of distalization

• 7-10 yrs of age
  – Incomplete root formation
  – Second molars are not erupted
Treatment procedures

• Fixed appliances
  – Open coil / herbst space regainer
  – Jackscrew space regainer
  – Gerber space regainer

• Removable appliance
  – Hawley’s appliance
    • With helical spring
    • Split acrylic dumb-bell spring
    • With sling shot elastic
    • Palatal spring
    • Expansion screws
Herbst space regainer

Jack screw space regainer
Gerber space regainer
Helical spring

Split acrylic dumb bell spring
Palatal spring

Expansion screw
Muscle exercises

- To guide the development of occlusion
- To allow optimal growth patterns
- To provide retention and stability post orthodontically
Lip exercises

• To obtain lip seal in hypotonic upper
  – Stretch the upper lip to overlap the lower lip
    • Self
    • Parentral help
  – Hold a piece of paper
  – Swishing of water
  – Massaging of lips
  – Play a reed musical instrument
  – Scotch tape
  – Oral screen
  – Button pull exercise
  – Tug of war exercise
Oral screen
Tongue exercises

• For swallow pattern
  – One elastic swallow
  – Two elastic swallow
  – Tongue hold exercise

• Tongue tie
  – Hold pull exercise
Masseter muscle exercise

- Clench the teeth for a count of ten and relax.
- Repeat till it tires.
Pterygoid muscle exercises

• Class II pts
• Protrude the mandible as much as possible and retract
• Improvement of the position of mandible gradually.
limitations

• Does not drastically alter any growth pattern
• Not a substitute for corrective orthodontics
• Patient compliance
• Worsen
Interception of skeletal malocclusion

- Class II
- Class III
- Functional appliances
  - Tooth borne
    - Active
    - Passive
  - Tissue borne
Class ii malocclusion
Class ii malocclusion
Visual treatment objective
Class iii malocclusion
Class iii malocclusion
Cad/cam myofunctional appliance

- Farrell in australia
- Flexible
- Inherent memory effects – non thermoplastic polyurethane
- Tooth guidance and functional effects too.
• Soft Blue pre-orthodontic trainer
  – Aberrant muscle movements
  – Mild tooth movements
  – 6 months
• Firmer pink pre-orthodontic trainer
  – Greater forces for the alignment of teeth
indications

- Mandibular anterior crowding
- Class II div 1 and 2
- Anterior open bite
- Deep bite
- Mild Class III/Pseudo Class III
- Oral habits
contraindications

• Posterior crossbite
• Sever Class III
• Nasal obstruction
• Non-cooperative child
• One hour in the day
• During sleep
• Blue trainer – 6 - 8 months
• Pink trainer – 12 months
adjustments

- Narrow mouth-trim distal ends
- Tongue tag area – V cut on either sides
- Extreme Class II cases – 2-3 mm of distal ends are trimmed
• Children less than 6 yrs of age – 4-6 mm is trimmed
• Class III cases – upper labial bow is trimmed
• Lip bumper effect – lower labial bow is trimmed
uses

- More economical
- More stable
- Improvement in facial profile and features
- Decrease the need for extractions
- Reduces the duration of corrective orthodontics
- Lateral expansion – Farrel bent wire system
Removal of soft tissue / bony barrier

- Retained deciduous teeth
- Supernumerary teeth
- Fibrous / bony obstruction of the erupting tooth bud
Thank you