

Early Treatment Orthodontics

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Definitions and Terms

■ Early Treatment

- Treatment initiated during the primary or mixed dentition with the purpose to prevent, intercept, or correct a specific orthodontic problem or problems. Also referred to as Phase I treatment.

Definitions and Terms

■ Preventative early treatment

- Patient education and maintenance of a favorable orthodontic condition. (e.g. patient education of stopping digit sucking habits, space maintenance appliances)

■ Interceptive early treatment

- Improvement of an orthodontic problem. (e.g. primary tooth guidance extractions, reduction of excessive overjet, growth modification appliances, space redistribution, space creation, deep bite reduction, habit appliances)

■ Corrective

- Complete or nearly complete correction of an orthodontic problem. (e.g. crossbite correction, growth modification, alignment of anterior teeth)

Definitions and Terms

■ Phase I

- Treatment initiated during the primary or mixed dentition with the purpose to prevent or intercept or correct an orthodontic problem, also known as early treatment.

■ Phase II

- Treatment initiated during the permanent dentition with a comprehensive approach to correcting the orthodontic problems, also known as comprehensive treatment

Goals of Early Treatment

■ Overall Goals of Early Treatment

- To improve or correct orthodontic problems that would result in:
 - Irreversible damage to the dentition and supporting structures.
 - Progression into a more severe orthodontic problem that would be more difficult to treat at a later date.

Goals of Early Treatment

- Specific goals of early treatment
 - Clearly defined endpoints of Phase I orthodontic treatment

Why is this important?

- To prevent extended Phase I treatment times
 - Patient “burn-out”
 - Hygiene concerns with fixed and removable appliances
 - Treatment costs, efficiency, redundant treatment
- Phase II is still likely for most cases

Goals of Early Treatment

- Manage potential for damage to dentition
 - Trauma, attrition, recession, impactions
- Improved occlusal function
 - Symmetry, functional shifts, attrition
- Improved psychosocial development
 - Self-Esteem, esthetics, facial balance/proportions
- Improved or corrected skeletal discrepancies
 - Improved airway, symmetry, functional shifts, facial balance/proportions
- Phase II simplification
 - Growth modification, space management, stability, reduce need for permanent teeth extractions

Early Treatment

Benefits

- Reduced permanent teeth extractions
- Patient cooperation
- Improved patient self-esteem
- Reduced trauma risk to anterior teeth
- Better stability?
- Skeletal balance, improved airway
- Easier correction of certain problems

Risks

- Extended treatment time
- Increased costs?
- Patient burnout
- Oral hygiene?

Early treatment may prevent or intercept more serious problems from developing and may make treatment at a later age shorter and less complicated.

In some cases, we will be able to achieve results that may not be possible once the face and jaws have finished growing.

Early interceptive treatment may give you the chance to:

- Guide jaw growth
- Lower the risk of trauma to protruded front teeth
- Correct harmful oral habits
- Improve long term stability
- Guide permanent teeth into a more favorable position
- Create a more pleasing arrangement of teeth, lips and face

Problems To Treat Early

- Crossbites
- Skeletal and Dental Overbites
- Crowding
- Oral Habits
- Supernumerary Teeth
- Appearance issues that effect self-esteem
- Space Maintenance from early extracted primary teeth
- Ectopic and Impacted teeth

Crossbites

- Posterior Crossbites



Crossbites

■ Anterior Crossbites



Overbites

■ Skeletal Overbite

- Class II molar position
- Cephalometric Evidence
- Facial Disharmony
- Division I and II

■ Dental Overbite

- Protruding/flared upper incisors
- Upright lower incisors



Overbites



Overbites

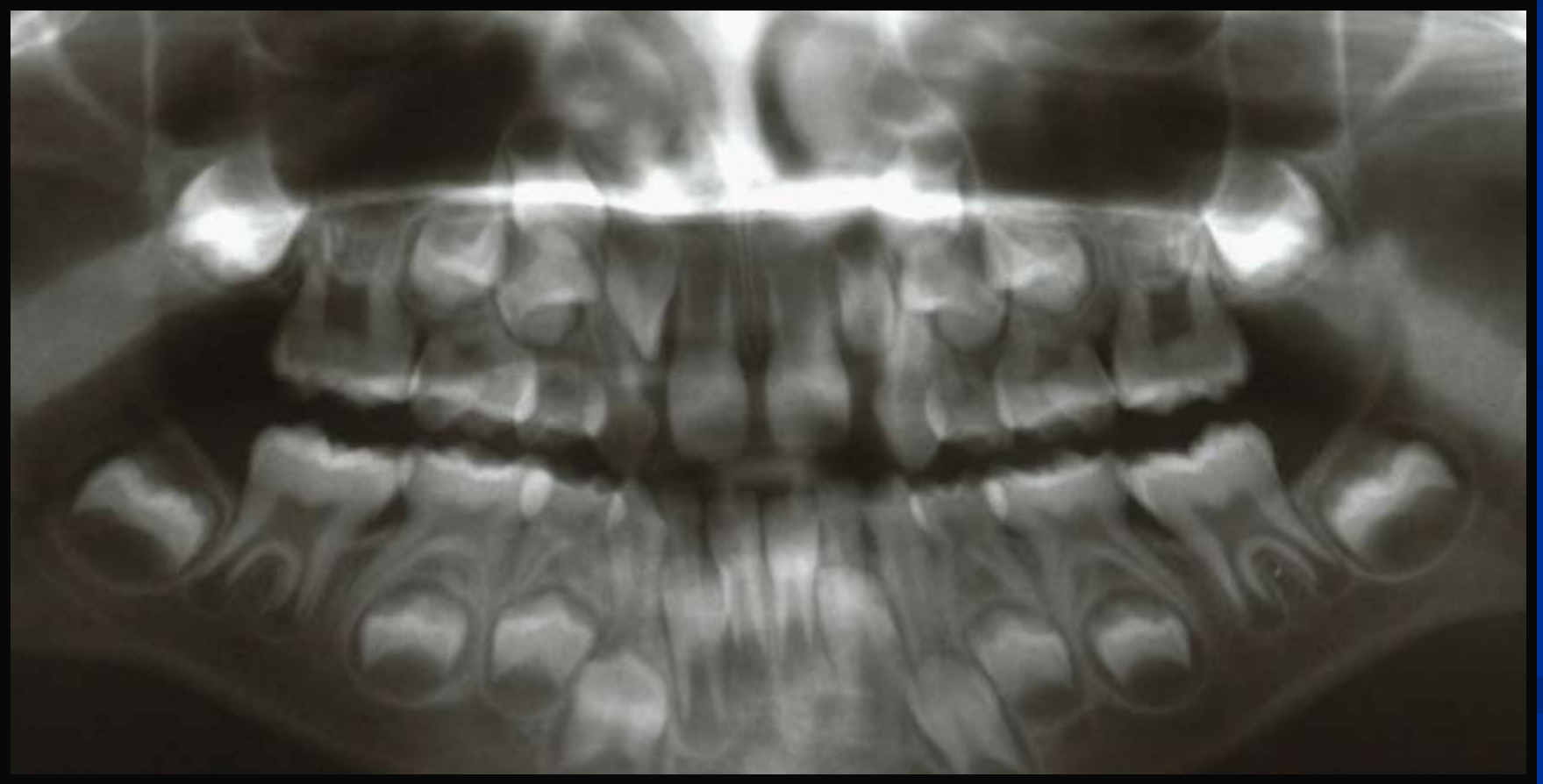


Crowding

- Crowding that effects the normal development and eruption pattern of permanent teeth.
If the amount of crowding is interfering with normal development it should be treated early.
- Panoramic radiographic evidence



Crowding



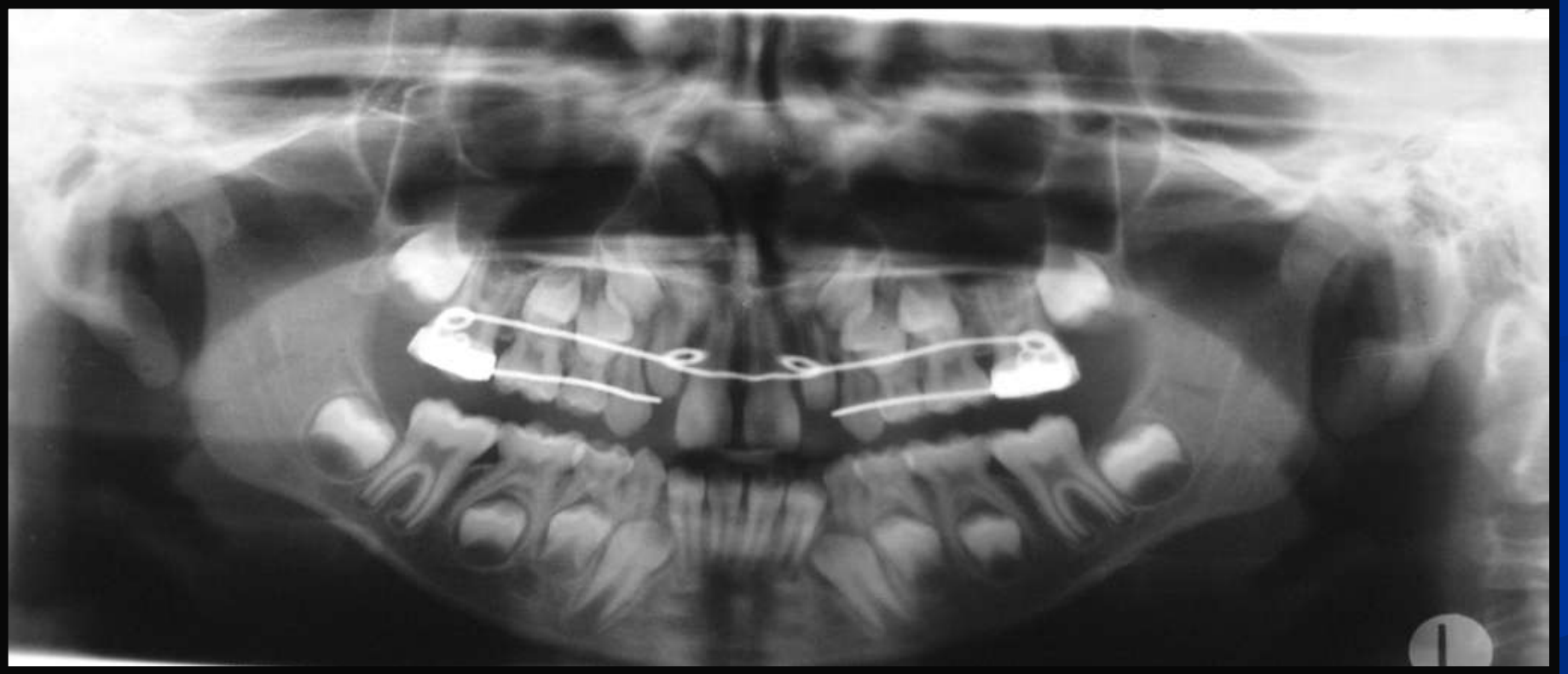
Crowding



Crowding



Crowding



Crowding



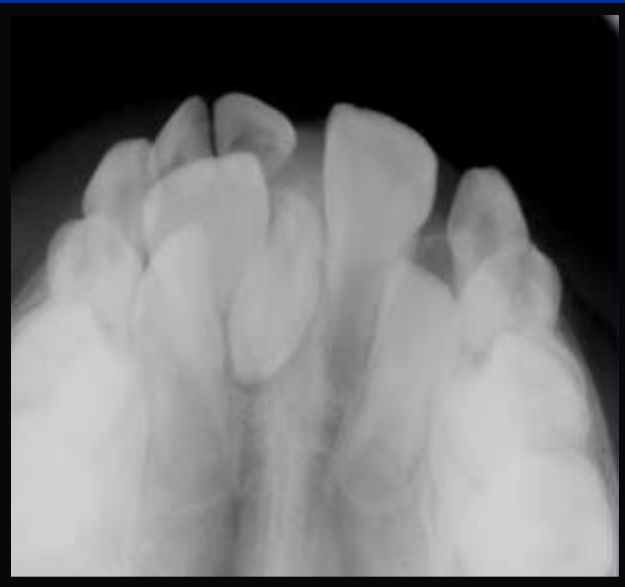
Oral Habits

- Thumb/Finger Sucking
- Tongue Thrusts
- Speech Problems



Supernumerary Teeth

- Mesiodens



Severe Appearance Issues

- Large Spaces
 - Frenum involvement



- Severely rotated teeth



Space Maintenance



Impacted Teeth

- Mesial impaction of erupting 1st Permanent Molars against distal of 2nd Primary Molars



- Ectopic eruption of Permanent Teeth
 - Panoramic Evidence

Dentist/Hygienist Role

■ Detection

- Space requirements, Occlusion, Parents concerns, PANOREX

■ Treatment

- Space Maintenance, Extractions of Supernumerary Teeth/Primary Teeth

■ Referral

- Can never refer too early! If problems do not warrant treatment patient will be placed on observed recalls.

American Association of Orthodontists

The American Association of Orthodontists recommends all children get an **orthodontic evaluation by age 7.**

Recent Advances in Orthodontics

- High Tech Braces and Wires
 - Self Ligating Brackets
 - Thermal Active Wires
- Skeletal Anchorage Devices
 - T.A.D.'s and Mini Plates
- Clear Aligners
 - *Invisalign, ClearCorrect, Simply5*

Most of these advances greatly improve the efficiency of treatment in the permanent dentition, essentially waiting for the problem to happen before fixing it. Even with these advances there are still tremendous benefits from early interceptive treatment when properly timed and understood.