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Timing of Orthodontic Treatment

The time at which orthodontic treatment should be started remains a matter of discussion.

In fact, there no time limit to start orthodontic treatment, it can start from the first day of life as a management of newborn infants with cleft lip and palate and it can extend along life. Orthodontic treatment must be carried at the time of problem exist or as near as possible to shorten the time of treatment and get the best result.

'Ideal' time for orthodontic treatment, if the clinician wants to maximize the benefits of growth and cooperation without subjecting every child to four or more years of treatment.

Stages of occlusal development

- Pre-dental stage (0-6months).
- Deciduous dentition stage (6 months-6 years old).
- Mixed dentition stage (6-12) years old.
- Permanent dentition stage.

Mixed dentition (6-12 years old):

Early transitional period (6-8) years old.

Inter-Transitional Period (8-10) years old.



Late 2nd transitional period (10-12) years old.

Branches of orthodontics:

The art and science of orthodontics can be classified into three categories based on the **nature and time of intervention**:

1-Preventive Orthodontics

The actions taken to preserve the integrity of what appears to be a normal occlusion at a specific time. It includes the actions undertaken prior to the onset of malocclusions such as:

***Care of deciduous dentition**

1-Caries initiation can be prevented by diet counseling, brushing, topical fluoride application and pit and fissure sealant.

2-Restoration of carious lesion that might change the arch length.

3-In case of premature extraction of primary teeth, space maintainer should be used.

Space maintainer is defined as the appliances that prevent loss of arch length and which in turn guide the permanent tooth into a correct position.

***Monitoring of eruption** and shedding timetable of the teeth.

***Early recognition and elimination of the oral habits** that might interfere with normal development of the teeth and jaw (thumb and lip sucking, mouth breathing).



2-Interceptive Orthodontics

It includes the procedures that are undertaken during the early manifestation of malocclusion to lessen the severity of malocclusion and some time eliminate the cause such as:

*Space regaining

It will ensure that there is no loss of arch length due to the premature loss of deciduous tooth / teeth.

*Serial extraction

Should be started when there's a sign of teeth crowding.

*Correction of developing anterior or posterior crossbite.

*Removal of supernumeraries and ankylosed teeth.

*Elimination of bony or soft tissue barriers to erupting teeth.

*Interception of developing skeletal malocclusions.

Guide the growth of mandible by using myofunctional appliances to deliver greater benefits to the patient

* Elimination of oral habits.

An interceptive orthodontic procedure will ensure that an oral habit does not become fixed and its deleterious effects do not affect the normal growth and development of the patient.

3-Corrective Orthodontics



It recognizes the existence of malocclusion and the need for employing certain technical procedures to reduce or eliminate the problem. The procedures employed in correction may require removable or fixed appliance, functional or orthopedic appliance and in some cases orthognathic surgery.

Anomalies of dental development and functional problems tend to be addressed in the mixed dentition, while definitive treatment tends to be delayed until the late mixed dentition to maximize growth potential and patient compliance. However, some clinicians advocate starting treatment earlier in certain types of malocclusion.

The Timing of Orthodontic Treatment

1. The deciduous dentition: treatment is hardly ever indicated, except when there is a malposed tooth gives rise to marked mandibular displacement.

2. The early mixed dentition: only treatment which can be completed rapidly and prolonged appliance wear is to be avoided. Types of treatment: serial extraction, fitting space maintainers, orthodontic correction for instanding incisor that causes a mandibular displacement.



cross bite

3. The late mixed and early permanent dentition: Most of the permanent teeth have erupted, so the greater part of orthodontic treatment is carried out. Furthermore, children in this age are often more willing to wear appliances than are adults.

4. The late permanent dentition: Orthodontic treatment can be undertaken at any age, but when the adults are unwilling to wear appliances over a prolonged period, it is usually wise to limit treatment to simple procedures which can be completed in a short time span.

When early treatment is decided, especially if it involves the use of active appliances, the following questions should be asked:

& Will the final result of two-phase treatment be better than that of a single course of treatment at a later stage?

& Will early treatment reduces the risk of trauma to susceptible incisors?

& Will early treatment result in greater skeletal change than treatment during the growth spurt?

& Will early treatment reduces the severity of the problem to make a second phase of treatment easier and of a shorter duration?

& Will early treatment has a beneficial psychological impact on the patient?



Important facts about the timing of Ortho. Rx

1. When correctly planned, early extraction of teeth for the relief of crowding may result in increased long-term stability and simplify appliance mechanics during active treatment.
2. Treatment in the mixed dentition is indicated for anterior and posterior crossbites.
3. If myofunctional appliance is planned for the treatment of Class II or III malocclusions, treatment should commence in the mixed dentition for maximum benefit.
4. The risk of trauma to the upper labial segment may justify early treatment of Class II division 1 malocclusions.
5. Most orthodontic treatment can be started in the late mixed dentition just before the loss of the primary mandibular second molar. This will maximize growth potential and compliance.

