

Efficient orthodontic treatment timing

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The ideal time to treat a malocclusion has been debated many times in the orthodontic literature.¹⁻²² One of the dilemmas facing the orthodontic clinician is whether or not to intervene before the eruption of the permanent dentition.^{1,2} It has been well documented that some malocclusions, such as skeletal crossbites (resulting in a functional shift) are best treated as early as possible; others, such as Class II malocclusions,² are best left untreated until a later stage of dental transition to best use growth and avoid patient burnout, unnecessary overtreatment, number of appointments, and overall inefficient therapy.

It is my opinion that one may approach the treatment of malocclusions based on the concept of "Efficient Treatment Timing" (Table I). According to this concept, a malocclusion should be treated as soon as possible when postponement of treatment

would lead to severe functional or esthetic concerns. On the other hand, treatment of certain malocclusions may take place at a later stage as long as any such later treatment would have the same effects with less overall treatment time involved. Thus the therapeutic benefits are maximized with optimal doctor time, continuous patient cooperation, and satisfaction.

As shown in Table I, habit control, functional crossbite correction, and alleviation of possible crowding, especially in deep bite cases, should be initiated as soon as they are detected. A deficient maxilla (Class III) should be protracted (facemask) as soon as the upper permanent first molars erupt and often times, right after the eruption of the upper permanent incisors. True mandibular prognathism is best treated surgically after completion of growth. Mild mandibular prognathism can be effectively addressed in the deciduous dentition with chin-cap therapy. Open and deep bite tendencies should be addressed by the late mixed dentition stage. Class II malocclusions, especially those requiring distal molar movement, may be best treated by nonextraction with a continuous treat-

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Table I. Efficient "treatment-time" table*

Problem	Efficient treatment period			
	Deciduous dentition 4-6 years	Early mixed (6-8 yrs.)	Late mixed (8-11 yrs.)	Permanent (growing)
Habit	Discontinuation			
Crossbite with shift		Maxillary expansion (ME)		
Crowding		E-space control expansion		Fixed appliances
Class II			Headgear/springs functional	Fixed appliances
Class III maxillary deficiency	Facemask			Fixed appliances
Class III mandibular prognathism	Chin-cap			Fixed appliances
Deep bite		Space maintenance/biteplate		Fixed appliances
Open bite (skeletal)			Headgear/vertical corrector/tooth guidance	Fixed appliances
Limited treatment		Any time		
TMD treatment		Conservative approach on detection		

*Treatment may continue from one period to the next if necessary. Care should be taken to avoid patient burnout.

ment of 1½ to 2 years that starts in the late mixed dentition, especially on the eruption of the upper first premolars.² Finally, any limited treatment (single tooth crossbite, diastema, spacing) can be addressed individually per patient at any age. Any dysfunction and/or pain to the temporomandibular joint should be addressed as soon as it is detected. Fixed appliance therapy should use the new technology wires, springs, and efficient bracket designs.

In conclusion, the objectives of any treatment before eruption of all permanent teeth are to correct the skeletal discrepancy between the jaws and improve function and facial esthetics by allowing them to develop normally, to create an ideal overbite and overjet relationship, to align the anterior permanent teeth (incisors) and reduce the chance of trauma to these teeth, to improve the width of the dental arches and to reduce the risk for (1) extraction of permanent teeth on normal eruption of the full permanent dentition and (2) for surgery (in severe cases). Unattended orthodontic problems can lead to impairments in speech, chewing, and loss or trauma of teeth. Orthodontics can enhance a person's self-esteem as treatment brings teeth, jaws, and soft tissue into correct position. This is accomplished with a good level of cooperation that a child demonstrates during this period.

A treatment will be successful only when the patient and the guardian are satisfied and happy about the result of therapy. This is always accomplished in an environment of caring that our young patients need.

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