## Is It Possible to Treat a Malocclusion at An Early Age?

Dr. German Ramirez-Yanez, DDS, Pedo Cert, MDSc, MS, PhD, FRCD(C)

alocclusions in children is an increasing problem, which in many cases is misdiagnosed. A recent study reported that around 90 percent of the children in primary and early mixed dentition present signs of a developing malocclusion. The current knowledge in oral biology permits to identify several factors associated with a developing malocclusions. Oral dysfunctions present at an early age is one of them.<sup>2</sup> Therefore, correcting as early as possible bad habits such as, mouth breathing, digital sucking, pacifiers use, infant swallowing and/or hyperactivity of the facial muscles among others, can correct deviations of the growth and development in the maxillaries. Thus, the goal of an early intervention should be to improve the maxillo-mandibular relationship in a tridimensional perspective and, guide the craniofacial growth and development between normal patterns.

Over the last decades, scientific studies have demonstrated that the maxillaries' higher growth potential is over the first five years of life<sup>3-4</sup> and, that a malocclusion that is present at the primary dentition is going to be the same or even worse at the mixed and permanent dentition.<sup>5</sup> Also, several tech-

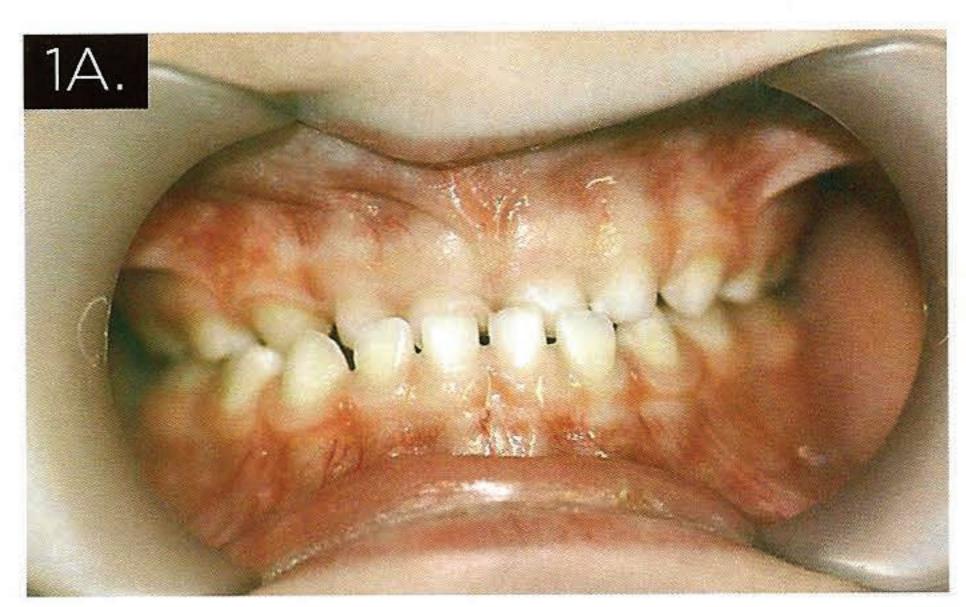
niques have been introduced, permitting to intercept a developing malocclusion at an early age, and so, bringing the craniofacial growth and development back into a normal pathway. The Planas' Direct Tracks (PDTs), the Myobrace System, the ALF appliance and the Bio-block are some of those systems that are available when intending to correct a developing malocclusion at an early developmental stage.

Dentists, pediatric dentists and orthodontists intending to provide early treatment should review their knowledge in craniofacial growth and development to be able to guide it with the available

systems, and so, to produce the better results when intervening a developing malocclusion in a child. Furthermore, those colleagues should understand that the mouth is a key interacting player in the human body, as well as that the various systems in our body constantly interact and intertwine.

A clinical case is presented below, where an anterior crossbite was corrected by means of the PDTs. In that case the deep bite was also corrected at the same time in order to bring the maxillo-mandibular relationship into an ideal relation for the patient's age. In that context, treatment was provided







A four-year-old girl treated with the Planas' Direct Tracks correcting an anterior crossbite and Deep bite in the primary dentition. The photograph on the right shows the results after six months of treatment.

within a tri-dimensional perspective. In a future issue, this author will be presenting insights on craniofacial growth and development together with the scientific evidence supporting an early intervention when a malocclusion is developing in children. More clinical cases treated at an early age with simple and non-invasive techniques will be also presented. OH

Dr. German Ramirez-Yanez is a Pediatric Dentist certified by the Royal College of Dentist of Canada. He is associated with the College of Dentistry, University of

Manitoba in Winnipeg, as Adjunct Professor and practices in Aurora, Ontario. He has over 25 years of experience treating malocclusions and oral dysfunctions at early age with a functional approach.

Oral Health welcomes this original article.

## References

- 1. Grando G, Young AA, Vedovello Filho M, Vedovello SA, Ramirez-Yañez GO. Prevalence of malocclusions in a young Brazilian population. Int J Orthod Milwaukee. 2008;19(2):13-16.
- 2. Ovsenik M. Incorrect orofacial functions until 5 years of age and their association with

posterior crossbite. Am J Orthod Dentofacial Orthop. 2009;136(3):375-381.

- 3. Liu YP, Behrents RG, Buschang PH. Mandibular growth, remodeling, and maturation during infancy and early childhood. Angle Orthod. 2010;80(1):97-105.
- 4. Laowansiri U, Behrents RG, Araujo E, Oliver DR, Buschang PH. Maxillary growth and maturation during infancy and early childhood. Angle Orthod. 2013;83(4):563-571.
- 5. Baccetti T, Franchi L, McNamara JA Jr, Tollaro I. Early dentofacial features of Class II malocclusion: a longitudinal study from the deciduous through the mixed dentition. Am J Orthod Dentofacial Orthop. 1997;111(5):502-509.