

Paediatric Orthodontics – is this the future?

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RECENTLY, the attention of popular dental publications has shifted focus towards an oversupply of dentists as well as the corporatisation of the industry and its diminishing returns. With this in mind, it is reasonable to say 21st century dentistry in Australia is undergoing a “perfect storm of changes”¹. However, despite the obvious signs of change, few dental professionals will accept the need to adapt to the evolving industry as well as modern patient demands. Even the most up to date marketing advice and elaborate practice layouts cannot disguise the fact that for decades Australian practitioners have been delivering the same service in slightly differing packages, helped along by government intervention (read mistakes). Furthermore, new dental technology as well as an educated public who now expect to retain their teeth for a lifetime means modern patients will no longer accept the inevitability of an edentulous old age.

In fact, oversupply of dentists is not a recent phenomenon and following graduation in 1971, I was one amongst a class of equally talented drill, fill and billers who then had to find a job. Fortunately, an exodus of practitioners to the UK NHS system

somewhat alleviated the oversupply. This then poses questions regarding the current state of the industry and how to progress from this point? Are 21st century practitioners destined to be routine providers of the \$99 all you can eat check, x-ray, scale and clean? If so, how can the industry evolve and continue to satisfy patient demand?

A brief scan of advertising material broadcast via the Internet reveals a highly competitive market driven by price like never before². Marketing experts insist the way forward for the industry is to place more emphasis on the quality of the patient’s experience. However, regardless of whether the patient visits a small suburban shopping centre practice or dental spa with hot towels and soothing music, the result will be the same and therefore, most patients will select the more economical option. Furthermore, most customers dread their visit to the dentist and would prefer to have their treatment over and done with rather than relax in the peaceful surrounds of a boutique dental spa.

However, there is an exception to the reality that if the outcomes are the same most often patients will select their treatment based on economical factors rather than the quality of the experience. When it comes to their child’s medical requirements, for parents price is of little relevance, especially if the requirement is serious. Therefore, if you will excuse the pun, when taking this into consideration we can say the market is in fact growing. For many practitioners though, their preference is to avoid treating children and with the addition of fluoride the frequency of cavities has vastly diminished. High levels of sugar in processed foods has increased decay rates but the days where each growing child would require 12-15 restorations every six months are fortunately well behind us. Filling cavities in growing children may prove unrewarding, both professionally and financially, and while there will always be screaming children with tooth decay, drilling and filling does not represent the future of the industry and the question remains, where to from here?

An article published in *Australasian Dentist*, titled *Airway and Dentofacial Development in Children*, stated that “Over 150 articles in the orthodontic literature address the interrelationship between upper airway compromise, neuromuscular dysfunction and aberrant (abnormal) dentofacial growth.”³ This quote provides a signpost pointing us towards the future of the industry. Since the time of Angle brackets and arch wires have been used

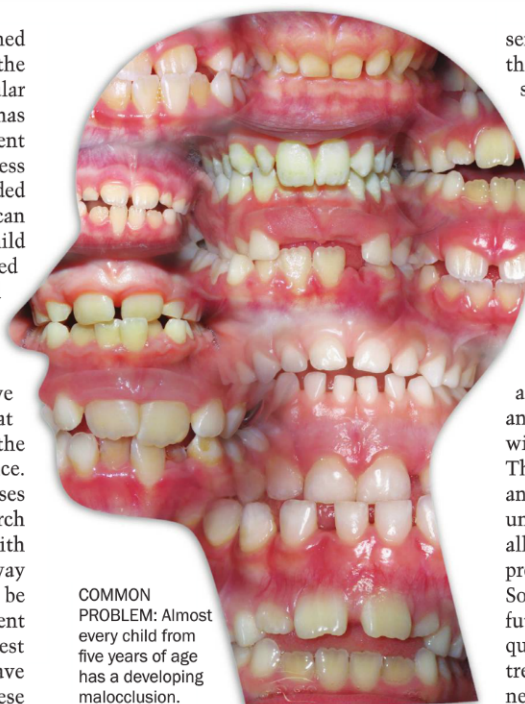


to mechanically straighten misaligned teeth for the better part of a century, the airway compromise and neuromuscular dysfunction causing malocclusion has largely been overlooked, to the detriment of the dental profession and countless patients. Narrow arches, crowded anteriors and class II malocclusion can now be observed in almost every child from five years of age and as stated in the article above, the Harvold studies demonstrated that differing malocclusions stem from the same cause.

Unfortunately, most dentists have ignored this evidence in the hope that a referral to the orthodontist once the malocclusion becomes severe will suffice. However, this does not address the causes of malocclusion. Contemporary research shows that to achieve stable results with minimal risk of damage to the tooth, airway and muscle dysfunction issues must be addressed prior to orthodontic treatment being commenced.⁴ Estimations suggest as much as 85% of growing children have a malocclusion and the majority of these are airway or muscle dysfunction related. Most parents notice these problems when they become evident in the primary and early mixed dentition. Regardless of whether the teeth are mechanically straightened, if upper airway compromise and neuromuscular dysfunction are not corrected they can cause lifelong health problems such as behavioural problems or obstructive sleep apnea. Despite resistance from traditionalists within the profession, there is an emerging field of dentistry, based on modern research and focused on correcting airway compromise neuromuscular dysfunction.

This 21st century field, which could be described as paediatric orthodontics or preventive orthodontics, recognises that correcting upper airway compromise and neuromuscular dysfunction assists to unlock a child's genetic potential for natural growth and development. Put simply a child who breathes through the nose, with correct tongue resting position in the maxilla and correct swallowing patterns will most likely develop correctly with little need for orthodontic treatment. Whereas, a child who mouth breathes and cannot posture the tongue correctly in the maxilla will have an aberrant swallow will most likely have a malocclusion and experience other related airway health issues.

Unfortunately, in the past simply explaining the importance of correct neuromuscular and airway function to the parents and demanding the child to keep their mouth closed and position the tongue correctly was ineffective. While in the past some dentists and orthodontists did



COMMON PROBLEM: Almost every child from five years of age has a developing malocclusion.

send children to speech or myofunctional therapists, these techniques were rarely successful so most often the cause of the problem was ignored and treatment focused on alleviating the symptoms. Generally this involved extractions, braces and permanent retention. However, once a dentist becomes aware of the indicators for upper airway compromise and neuromuscular dysfunction a diagnosis can be made on nearly every child.

Furthermore, when the dentist alerts parents that their child has a growth and development problem generally they will want immediate treatment options. This has the two-fold benefit of addressing an extremely prevalent, although largely unnoticed, public health issue as well as allowing dental professionals to access a previously untapped and growing market. So if paediatric orthodontics represents a future avenue for dental professionals the question then becomes one of how do we treat the upper airway compromise and neuromuscular dysfunction that is at the

Treatment with the MYOBRACE SYSTEM

Prior to treatment

Changes after 2 years



CASE ONE: AHEAD OF THE TIMES: Highly developed paediatric orthodontic systems decrease the severity of malocclusion and often prevent the need for traditional extraction and fixed braces techniques are available.

Prior to treatment

Changes after 5 months



CASE 2: MODERN TREATMENT: MRC's Myobrace system integrates myofunctional habit correction, arch expansion and dental alignment into one system, which can be incorporated into any orthodontic practice and allows for more stable results with less chair side time and increased practice profitability.

root of malocclusion and associated health concerns?

There are in fact highly developed paediatric orthodontic systems available now. As well as offering the potential for early preventive pre-orthodontic treatment, these systems decrease the severity of malocclusion and often prevent the need for traditional extraction and fixed braces techniques. MRC's Myobrace is one of these and packages myofunctional habit correction, arch expansion and dental alignment into one integrated system, which includes comprehensive patient education and satisfies the parental demand for modern pre-orthodontic treatments. This integrated system can be incorporated into any orthodontic practice and allows for more stable results with less chair side time and increased practice profitability. ♦

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