Tooth movement: Health science or unhealthy cosmetics?

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Moving teeth with braces has long been considered a permanent “cure” to crowded teeth. However, we now know that this traditional approach is neither permanent nor a cure.

The literature now accepts that the only way to ensure satisfactory alignment is by use of fixed or removable retention for life. Orthodontics has thus proven its reliability on these interventions.

When we graduate as dentists or specialists, we are all implicitly bound to honor the trust placed in us as medical professionals.

Despite this, traditional orthodontics may cause root resorption or enamel damage, exacerbate periodontal disease, increase the chance of caries and devitalize teeth. After this begins the need for long-term maintenance of permanent retainers, the burden of which is borne by both the patient and the dental practitioner.

Despite our status as medical professionals, has the orthodontic profession veered away from being a health science and moved toward the realm of cosmetics?

Premolar extractions

There is no better example than the prevalence of premolar extractions in private practice. Epidemiological data is sparse, but according to the most contemporary survey conducted of U.S. private practices, 25-85 percent of our children have healthy dentitions was due to gritty diets causing interproximal attrition. Begg suggested that this amounted to a premolar’s width in each quadrant. Begg’s research has been roundly rejected in the literature, not least because his own theory refutes his results; both crowding and attrition increased with age.

Do premolar extractions lead to more stability?

No. Little’s definitive 1981 study showed that mandibular anterior alignment in less than 30 percent of extraction cases 10 years post-retention, and in less than 10 percent of cases 20 years post-retention. Many other studies have corroborated this conclusion.

Although hygienists, dentists and all other specialists strive to preserve teeth, this principle seems outside the orthodontic profession’s orbit of thinking.

What causes malocclusion?

“When there is a struggle between muscle and bone, bone yields,” wrote Graber in his seminal 1963 manifesto on the influence of muscles on malformation and malocclusion. In their review of the orthodontic influence of mandibular muscles, Pepiacci et al. (2005) corroborate it is “well accepted” that the position and function of the facial and mandibular muscles are “critical influences” on alignment and stability.

The weight of the literature rests with the fact that muscle function and posture (the way patients swallow and posture their tongue) is the most significant cause of malocclusion.

A time for change?

The orthodontic tradition has been evolved by great minds throughout its 100-year history, such as Angle, Frankel, Graber, Rickets, Garfiner and Little.

However, if we aspire to be considered a scientific medical profession, orthodontics must continue to evolve with the research. This means re-orientation toward a more evidence- and health-based approach.

Are we going to continue to accept relapse or retention until the death of the patient or the orthodontist? The science is there: the cause is muscle function and the solution is Myofunctional Orthodontics.

References


About the author

Dr. Rohan Wijey works and lives in Australia on the Gold Coast. He practices at MRC’s clinical arm, MRC Clinics, and teaches dentists and orthodontists from around the world about early intervention and myofunctional orthodontic appliances.

Obituary: Orthodontist Dr. Earl ‘Buddy’ Broker

Dr. Earl “Buddy” Broker passed away on Aug. 15, 2013, following a brief illness. He was a founding faculty member of the orthodontic residency program at Einstein Medical Center Philadelphia. He continued in this capacity until his death.

In addition to teaching comprehensive orthodontics to postgraduate students, he also directed their education in temporomandibular disorders. Of note, he taught all graduates of the program including current residents in training.

Broker was born and raised in Philadelphia and graduated from West Philadelphia High School. Both his pre-dental and dental education occurred at Temple University, where he graduated with a DDS degree in 1961.

He then entered the orthodontic practice of Drs. Maxwell S. Fogel and Jack M. Magill as an orthodontic preceptor, completing his training in 1965. Pre-dating the official start of the orthodontic residency program, he joined the orthodontic staff at Einstein as an orthodontic fellow receiving a fellowship certificate, also in 1965.

He became a diplomate of the American Board of Orthodontics in 1995. He also served as a reserve dental officer in the U.S. Army Dental Corp from 1961 until 1968, receiving an honorable discharge as a captain.

Broker was a tireless supporter of Drs. Fogel and Magill in preparing for the start of the Einstein Medical Center Orthodontic Residency Program in the early 1960s. He assisted them in organizing program teaching materials and completion of accreditation application information.

For many years, Broker practiced both in Jenkintown, Pa., and Voorhees, N.J. More recently, he limited his practice activity to the Voorhees office.

In addition to caring for the orthodontic needs of his patients, his knowledge and expertise in treating temporomandibular disorders was highly regarded by patients who traveled great distances to seek his care.

Broker is survived by his wife, Joyce, sons Brian and Bradley, and families, brother Gerald and sister Donna.

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