Letters to the Editor

doi:10.1093/ejo/cjt025
Advance Access publication 5 June 2013

Crossbite cause TMD: a good hypothesis does not make it always true

Sir,
We are conscious that the review article ‘Posterior crossbite and temporomandibular disorders (TMDs): need for orthodontic treatment?’ (Thilander and Bjerklin, 2012) will find a broad readership and will contribute enormously to our understanding of orthodontic treatment need for preventive purposes. Because the assessment of the orthodontic treatment need for preventive purposes, and particularly TMD, is complex, some additional clarification might be useful. The article contains at least two points where the reader should be warned not to draw false conclusions in the process of making a clinical decision.

In their review article, the authors discussed the associations between a unilateral posterior crossbite with mandibular deviation and some signs and symptoms of TMD. They conclude that ‘Need for orthodontic treatment of a functional unilateral posterior crossbite shall first of all focus on rehabilitation of the asymmetric muscular activity and the changed condylar position in the glenoid fossae due to the mandibular displacement’. In their first paragraph, the authors state that although improving dentofacial appearance is the major motivation of the patients seeking orthodontic services, prevention of dentofacial pathologies would play an important role too. Unfortunately, on the one hand, the evidence is overwhelming that patients’ search for therapy is based on their desire to change/improve their physical appearance, motivated in turn by often uncertain psychosocial reasons; yet, on the other hand, the evidence that orthodontic treatment may enhance oral health and the longevity of dentition is weak. For example, the authors argue that there is a need for prophylactic treatment of proclined maxillary incisors to avoid incisor injury. However, studies have shown that there is no higher risk of incisor injury in patients with proclined maxillary incisors (Harrison et al., 2007; Weyant, 2008).

The same holds true for the claimed preventive effect of treatment of crossbite. A comprehensive review from 2004 confirmed that there is no persistent association between malocclusion and TMD (Gesch et al., 2004a). In a large population-based study, the analyses of the results confirmed a lack of any strong association between malocclusion (including crossbite) and TMD. Some factors like angle class II malocclusion, deep bite, anterior crossbite, spacing, and wear facets in dental restorations seemed to be even protective for the occurrence of TMD signs and symptoms (Gesch et al., 2004a,b,c, 2005). The results of these studies received high recognition in the scientific world and we are puzzled why they were not included in the review by Thilander and Bjerklin (2012).

To conclude, the authors use a correct scientific reasoning and base their conclusions on the most probable hypotheses and they deserve a compliment for this. However, we still suggest to be cautious when making conclusions based on hypotheses because although they may be often true, they are never certain.

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