Letters From Our Readers

To: Editor, *The Angle Orthodontist*

RE: Short-term effects produced by rapid maxillary expansion and facemask therapy in Class III patients with different vertical skeletal relationships. *The Angle Orthodontist*. 2015;85:927-933.

We thank Dr. Fulin and Dr. Juan very much for their comments on our paper. It is true that this study was retrospective, however, the treatment methods used in this study were totally under our control as all patients "were treated consecutively with RME/FM therapy at the Department of Orthodontics of the University of Florence and the University of Rome Tor Vergata".

Although the ANB angle still is popular among orthodontists to describe the sagittal intermaxillary skeletal relationships, it is affected by major limitations (see Jacobson 1988)[1] as it can be influenced for example by S-N length or by the vertical inclination of the jaw bases. This is why we decided to use the Wits appraisal instead of ANB angle for the inclusion criteria.

Treatment effects produced by the facial mask are typically both at the dento-alveolar and skeletal levels. Independently from the initial diagnosis (greater component of either maxillary retrusion or mandibular protrusion), the goal of early treatment of such a severe skeletal imbalance is to produce an overcorrection of the skeletal Class III relationships through favorable changes both in the maxilla and in the mandible. Overcorrection is very important considering the very unfavorable Class III mandibular growth pattern that can occur, especially during pubertal and post-pubertal growth periods.[2] What we have learned from the long-term assessment of the skeletal changes produced by this treatment protocol is that effects of maxillary protraction tend to relapse to a greater extent than do mandibular sagittal changes, [3] despite the fact that this treatment protocol was proposed originally for the treatment of maxillary retrusion.

The results of the present study showed that the use of a correct downward and forward inclination of the extraoral elastics of the facial mask (30 degrees to the occlusal plane) limited the negative side effects of RME/FM treatment in terms of bite opening tendency in the treated groups regardless of the vertical skeletal relationships at T1. Therefore, we do not recommend changing this angulation in patients with initial different vertical skeletal patterns because the aim of orthopedic treatment of Class III malocclusion with RME/FM is to maintain good vertical control of the maxilla during maxillary protraction. Moreover, both the removable lower bite-block and the splinted RME may help in limiting the posterior rotation of the mandible typically produced by FM therapy.

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3. Masucci C, Franchi L, Defraia E, Mucedero M, Cozza P, Baccetti T. Stability of rapid maxillary expansion and face-mask therapy: a long-term controlled study. *Am J Orthod Dentofacial Orthop*. 2011;140:493–500.