# Letters From Our Readers

**To: Editor, *The Angle Orthodontist***

**Re: Effects of rapid maxillary expansion on upper airway volume: *A three-dimensional cone-beam computed tomography study*. Yousef Abdalla, Louise Brown, Liselotte Sonnesen. *Angle Orthod*. 2019; 89: 917-923.**

Is RME treatment effective for increasing upper pharyngeal airway volume and area or not?

In this original study, the authors highlighted that the tooth-borne rapid maxillary expander was effective in treating dental and dento-alveolar structures but there was not any significant effect on the upper pharyngeal airway volume or the minimum cross-sectional area. Although orthodontists perform RME to widen a narrow maxilla, there are lots of additional effects especially on the nasomaxillary complex. The conclusions of this study regarding the nasomaxillary structures seem to contradict the results of this and previous studies.

The authors concluded that, despite increasing intermolar and maxillary widths, the tooth-borne rapid maxillary expander was not associated with a significant change in upper pharyngeal airway volume or minimum cross-sectional area when used in children. On the other hand, the authors found that the upper airway volume and minimal cross-sectional area were both increased in the control and RME groups from T0 to T1. In addition, the mean upper airway volume and minimal cross-sectional area were similar in both the RME and control groups at the progress scan (T1) which was 2 years $\pm$ 11 months after T0. The data of this study confirmed the success of the RME procedure on both the dental and dento-alveolar structures and also the nasomaxillary complex. However, the authors concluded that the tooth-borne rapid maxillary expander was not associated with a significant change in upper pharyngeal airway volume or minimum cross-sectional area when used in children. Is there an expectation for any additional increase in upper pharyngeal airway volume or minimum cross-sectional area? I want to ask the authors whether tooth-borne RME treatment is effective in increasing upper pharyngeal airway volume and minimum cross-sectional area or not. I think this issue should be clarified by the authors.

Although there are similar studies in the literature, I don't think it is necessary to take CBCT images due to excessive use of ionizing radiation in growing children to evaluate the effects of orthodontic treatments except for some special indications.

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