

READER'S FORUM

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Comparison of the effects of rapid maxillary expansion and alternate rapid maxillary expansion and constriction protocols followed by facemask therapy.

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Q1. The maxillary protraction achieved with use of facemask during the 12 month period was 2.53 mm for the rapid maxillary expansion (RME)/facemask group and 2.73 mm for the alternate rapid maxillary expansion and constriction protocol (Alt-RAMEC)/facemask group, indicating no increased protraction with Alt-RAMEC. When considering the normal growth pattern of the anterior cranial base and accompanying forward displacement of the nasomaxillary complex, the net treatment effect on the maxilla would be less than 2 mm. This may not be enough compensation for wearing facemask 16 hours/day for 12 months. Also, the long-term evaluation regarding the effectiveness of protraction RME/facemask treatment showed that no significant differences were found in the maxillary changes¹ with a lack of maxillary improvement. What is the best indication for RME/facemask or Alt-RAMEC/facemask treatment at the present time?

Q2. Anterior nasal spine moved 1 mm downward only in the Alt-RAMEC/facemask group. This may have affected the sinus volume. What is the reason for increased total and lower pharyngeal airways only in the Alt-RAMEC/facemask group?

Questioned by

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A1. Since there is no significant difference from the point of treatment efficiency between the two groups, it would be wise to use RPE/facemask protocol in all cases except the cases do not need expansion of the maxilla. If we want to benefit from disarticulation of the maxilla, we can use Alt-RAMEC/facemask protocol not to over-expand the maxilla.

A2. Significant downward movement of the maxilla together with more efficient anterior movement of the maxilla might result in improvement in lower and total pharyngeal airway and increased value of the maxillary sinus volume.

Replied by

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Reference

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

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