

Letters From Our Readers

To: Editor, *The Angle Orthodontist*

Re: New treatment modality for maxillary hypoplasia in cleft patients. Protraction facemask with miniplate anchorage. *Angle Orthod.* 2010;80:595–603. By Baek SH, Kim KW, Choi JY.

Regarding the application of FM/MP presented by Baek et al. (2010)¹ I would like to stress some inherent limitations of the system as we used it in the past during distraction osteogenesis (DO) treatment modality with the aim of advancing the maxilla in cleft lip and palate (CLP) patients.^{2–4}

(1) Force application, ie, wearing the face mask, is totally dependent on the patient's cooperation and motivation. Consequently this type of force is not continuous but rather intermittent and may reduce its overall effectiveness. (2) Soft tissue laceration and decubitus often occur in the mucogingival and buccal mucosa area where the miniplate penetrates the oral cavity. (3) Two different surgeries are required (application and removal of the miniplates) under local anesthesia but may also involve intravenous sedation and general anesthesia for young children. (4) The temporarily achieved improvement in nasomaxillary advancement using FM/MP (3–5.6 mm¹) in late childhood (7 to 12 year-old patients¹) may diminish with the accelerated mandibular growth during adolescence contributing to an increased maxillo-mandibular sagittal discrepancy.

It is important that the craniofacial clinician consider the above limitations.

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REFERENCES

1. Baek SH, Kim KW, Choi JY. New treatment modality for maxillary hypoplasia in cleft patients. Protraction facemask with miniplate anchorage. *Angle Orthod.* 2010;80:595–603.
2. Aizenbud D, Rachmiel A. 3-Dimensional distraction osteogenesis of the midface – orthodontic considerations. *Ann Roy Australas Coll Dent Surg.* 2008;19:77–87.

3. Rachmiel A, Aizenbud D, Ardekian L, Peled M, Laufer D. Surgical assisted orthopedic protection of the maxilla in cleft palate patients. *Int J Oral Maxillofac Surg.* 1999;28:9–14.
4. Aizenbud D, Rachmiel A. Letter to the editor: Minami K, Mori Y, Tae-Geon K, Shimizu H, Ohtani M, Yura Y. Maxillary distraction osteogenesis in cleft lip and palate patients with skeletal anchorage. *Cleft Palate Craniofac J.* 2009;46: 221–223.

To: Editor, *The Angle Orthodontist*

Re: Response to New treatment modality for maxillary hypoplasia in cleft patients. Protraction facemask with miniplate anchorage. *Angle Orthod.* 2010;80:595–603. By Baek SH, Kim KW, Choi JY.

First of all, we would like to appreciate Dr. Aizenbud's interest to our method.

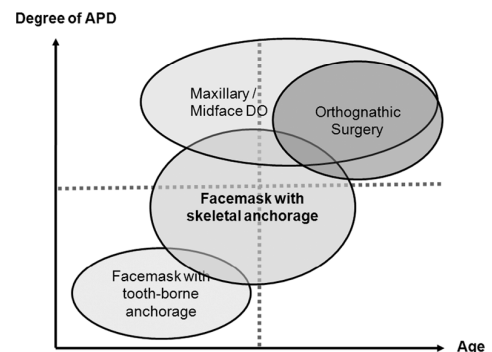


Figure 1. Treatment modality of maxillary/midface hypoplasia according to age and anteroposterior discrepancy.

- (1) Although wearing the face mask is dependent on the patient's cooperation and motivation, this approach has been used for correction of maxillary/midface hypoplasia until now. In spite of some limitations in facemask with miniplate (FM/MP) therapy, we think that there are different indications for FM/MP therapy and distraction osteogenesis (DO) treatment according to patient's age and anteroposterior discrepancy (Figure 1). Is it possible to apply DO treatment modality to advance the maxilla for all of cleft lip and palate (CLP) patients? Some CLP patients need DO treatment and the others need FM

therapy with conventional tooth-borne anchorage or skeletal anchorage. If patient does not want to take an invasive surgical approach, FM/MP therapy can be a useful option for maxillary protraction.

- (2) If the distal end of miniplate is exposed through the buccal attached gingiva, there have been no significant complications including soft tissue laceration and decubitus according to our experience.
- (3) According to our experience, installation and removal of the miniplate can be performed under local anesthesia in majority of cleft children patients.
- (4) Since the degree of advancement of the maxilla and/or midface using FM/MP can diminish with the residual mandibular growth, we should give a proper overcorrection (3 to 5 mm overjet and Class II canine relationship) and continue protraction until growth peak before stop of FM/MP therapy or removal of miniplate.

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To: Editor, *The Angle Orthodontist*

Re: Evaluation of root resorption following rapid maxillary expansion using cone-beam computed tomography. *Angle Orthod.* 2011 Aug 15. [Epub ahead of print]. DOI: 10.2319/060411-367.1 By Asli Baysal, Irfan Karadede, Seyit Hekimoglu, Faruk Ucar, Torun Ozer, Ilknur Veli, Tancan Uysal.

I would like to congratulate authors for their effort in preparation of the manuscript. Actually I have been awaiting such a study for a long time. As a dentomaxillofacial radiologist I often encounter root resorption in patients who had undergone rapid maxillary expansion. I have some comments regarding radiographic assessment of root resorption lesions which I believe would be useful for the readership.

Root resorption prognosis is poor when it continues without diagnosis. The development of cone beam computerized tomography (CBCT) dedicated to dento-maxillofacial imaging has made it possible to obtain a three-dimensional image of a single tooth with a reduced effective radiation dose, shorter acquisition scan time, easier imaging and lower cost than medical CT systems.^{1,2} However, unlike x-ray projection images, CBCT images

are susceptible to beam hardening and scatter artifact from metallic objects that may limit their usefulness. As stated by the authors, in the present study, existence of metal bands on molar teeth did not allow an absolute root volume calculation. Development of artifact suppression algorithms and enhanced reconstruction methods should be encouraged in the newer systems.³

A common approach in orthodontics is the use of CBCT machines with large FOVs (field of views) which have higher effective patient doses and do not allow reconstruction with very small voxel sizes as in the mentioned study. For the assessment of dental lesions which require detailed three dimensional assessments such as root resorption, a very limited FOV and a very small voxel size is more beneficial in terms of image quality, observer performance and effective patient dose. Newer CBCT systems offer smaller voxel sizes and it is possible to obtain a better diagnosis and observer agreement in resorption defects.^{1,2} Considering the fact that most orthodontic patients are children and a large field of view is necessary for orthodontic purposes, clinicians must use caution when prescribing CBCT for orthodontic patients.

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REFERENCES

1. Kamburoğlu K, Kuşun Ş, Yüksel SP, Öztaş B. Observer ability to detect ex vivo simulated internal or external cervical root resorption. *J Endod.* 2011;37:168–175.
2. Kamburoğlu K, Kuşun Ş. A comparison of the diagnostic accuracy of CBCT images of different voxel resolutions used to detect simulated small internal resorption cavities. *Int Endod J.* 2010;43:798–807.
3. Schulze R, Heil U, Gross D, Bruellmann DD, Dranischnikow E, Schwanecke U, Schoemer E. Artefacts in CBCT: a review. *Dentomaxillofac Radiol.* 2011;40:265–273.

To: Editor, *The Angle Orthodontist*

Re: A retrospective randomized double-blind comparison study of the effectiveness of Hawley versus vacuum-formed retainers. *Angle Orthod.* 2011;81: 404–409. By Stephen Barlin, Roland Smith, Ray Reed, Jonathan Sandy, Anthony John Ireland.

How can retrospective RCTs and double-blind achieved?

We read with great interest the article 'A retrospective randomized double-blind comparison study of the effectiveness of Hawley vs vacuum-formed retainers' that was published in the May 2011 issue of your journal. The authors compared the effects of Hawley retainers with vacuum-formed retainers through a double-blind randomized controlled trial (RCT) and found that there might be no difference between the two retainers in the change of arch width, arch length or modified Little's index after a 12-month follow-up. It is a very useful trial providing important evidence to the clinicians. However, there are two points that are not clear to us. Firstly, the title refers to a 'retrospective' trial, where RCTs are normally prospective studies.^{1,2} So we are writing to ask whether there was an error in the title or whether the authors had followed a different design. Secondly, we feel that due to large differences in the shapes of Hawley and vacuum-formed retainers, it would be difficult to achieve a double-blind status. Could the authors explain the exact process employed for achieving this? We believe this would be of great help for the design of future studies. Finally, we want to thank the authors again for the precious contribution in clinical decision making.

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References

1. Higgins JPT, Green S, (editors). *Cochrane Handbook for Systematic Reviews of Interventions*. Chichester: John Wiley & Sons Ltd. 2008.
2. Haynes EB, Sackett DL, Guyatt GH, et al. (editors). *Clinical epidemiology: how to do clinical practice research*, 3rd ed. Philadelphia, Pa: Lippincott Williams & Wilkins. 2006.

To: Editor, *The Angle Orthodontist*

Re: Response to: A retrospective randomized double-blind comparison study of the effectiveness of Hawley vs vacuum-formed retainers. *Angle Orthod.* 2010;81(3):404–409. By Stephen Barlin, Roland Smith, Ray Reed, Jonathan Sandy, and Anthony John Ireland.

Thank you very much for your kind, encouraging words regarding our research project.

In answer to your question "was the study prospective or retrospective", I must say this was a matter of serious debate amongst those involved in the project. The original data collection was planned and executed as a prospective study, but it was a period of some years before the data was analyzed, so it could then be argued that it was a retrospective study. In the end, in order to err on the side of statistical caution, we decided to call it a retrospective study.

On the question of blinding, clearly it is easy to tell the difference between a Hawley and a vacuum formed retainer. However the blinding refers to the fact that on receipt of the impressions taken at the time of debonding the technician used dice to decide the type of retainer constructed. This meant the clinician could not influence the type of retainer made. Further blinding occurred because each data set for analysis consisted of a set of numbered plaster models with absolutely no way for the operator (myself, who did not see the patients) to ascertain the retainer type used. Once all **ensurations** were completed, information about the retainer used was introduced to allow the data to be analyzed as presented.

The term double blind in this case represents the fact that the type of retainer was chosen randomly and the results were collected without prior knowledge of what appliance type was used. This was done to try to eliminate any operator bias issues.

I hope this answers your questions adequately. Once again I thank you for your interest in this work.

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