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To: Editor, The Angle Orthodontist

Re: Vertical changes in Class II division 1 malocclusion after premolar extractions

The study by Kazem S. Al-Nimri (2006;76:52–58) is very informative to a large readership of *The Angle Orthodontist,* in that the prevailing conventional wisdom of the occlusal wedge hypothesis is again questioned. This paves a clear path based on evidence for emerging orthodontists.

It's really delicate to comment critically upon the nice work done by the author. We all agree that in a camouflage treatment of Class II division 1 malocclusion, the mandibular extraction space (irrespective of first premolar or second premolar extraction) should be meticulously used for molar protraction of 5 or 6 mm to achieve a Class I molar relationship. I believe a nonconformity exists between the criteria for selection of samples and the extraction patterns according to the degree of crowding. The amount of reduction in tooth mass governs the extraction sequence, and is more frequently carried out in Class I crowded dentitions. But some amount of maxillary molar distalization along with mandibular molar protraction is inevitable to establish a Class I relation in Class II malocclusion cases.

In this study, the total residual spaces (mean) in the first premolar extraction and second premolar extraction samples were 8.5 and 10.9 mm respectively. Furthermore, it was conceded that the transpalatal arch (TPA) and Class II intermaxillary elastics were used as anchorage support in the maxillary dentition. Nevertheless, the TPA is not very helpful in controlling the anchorage loss.¹ Any amount of anchorage slippage with maxillary molars is detrimental. Hence, I wonder how the author managed to establish a Class I occlusion at the end of treatment in first premolar extraction cases with mean crowding of 6.6 mm and overjet of 9.1 mm.

Furthermore, in another study, it was shown that when maxillary first premolars were extracted in conjunction with mandibular first or second premolars, the anchorage loss of the maxillary molars was greater when the mandibular second premolars were extracted (3.7 vs 4.7 mm).² It is highly recommended to use headgear for good anchorage support in these type of patients. The extrusive effect of headgear could be controlled by bending the outer bow upward 20°.³

The influence of facial growth and treatment effects on vertical dimensions were not clearly differentiated in the study. By and large, orthodontic mechanics are extrusive in nature. Even a greater space closure is extrusive in nature, not just a mere use of elastics.⁴

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Re: Response from Dr. Al-Nimri

The questions asked by the readers of *The Angle Orthodontist* regarding the article "Vertical Changes in Class II Division 1 Malocclusion After Premolar Extractions" are concerned with the clinical treatment of the subjects included in the study rather than the design or the results of the study. As the subjects included in this retrospective study were not treated by the author, I would not be able to respond to these questions.

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Letter to the Editor

To: Editor, *The Angle Orthodontist* Re: Esthetic influence of negative space in the buccal corridor during smiling.

The authors in their study (2006;76:198-203) have come to the conclusion that negative space or buccal corridors did not influence the esthetic evaluation of smile photographs for either orthodontists or lay people. We would like to add here that the authors had taken only lower-facial-third smiling photographs for evaluation instead of full-face frontal smiling photographs; this might have affected the judgment of lay people and thereby the result of the study. A full-face frontal smiling photograph would have provided a better judgment regarding influence of buccal corridor space on smile esthetics. In a similar study by Moore et al,1 authors took full-face color slides. Their results showed that lay persons judged broad smile fullness with a minimal buccal corridor to be more attractive than narrow smile fullness with a large buccal corridor.

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Re: Response from Dr Ritter

Thank you for your interest in our article "Esthetic Influence of Negative Space in the Buccal Corridor During Smiling" (Angle Orthod. 2006;76:198-203). We understand your comparing our article with a previous article.1 Moore et al1 used digitally-manipulated images from 10 selected individuals, creating larger or smaller buccal corridors. They compared the original and the altered pictures from the same individuals, so the full frontal face did not differ during the analysis. In our study, we did not use manipulated images. Additionally, we compared smile pictures from 60 different individuals. Had we used full-face photographs, probably other facial factors-such as nose, evebrows, eyes, etc-would have influenced the analysis. Therefore, we opted not to use full-face photographs to minimize these "distractors." Roden-Johnson et al² used a very similar methodology to ours, using only the facial lower third, and found that buccal corridor spaces (negative spaces) did not influence smile esthetics for orthodontists, general dentists, and lay people. Every study, certainly including ours, has limitations. We believe that different studies using different methodologies can complement each other and contribute to the translation of this type of research into clinical orthodontic practice.

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