Authors' response

We are very grateful for the interest in our study and appreciate the opportunity to discuss the comments.

It was pointed out that pairing of the groups is not achieved by just controlling variables such as the skeletal relationship and vertical growth and suggested that the muscular pattern and the facial biotype should be considered for matching. It is important to recognize that a perfect matching between groups is very difficult to achieve, even in retrospective studies.[1] The muscular pattern could be considered as an important factor to be evaluated. However, it was not the focus of this specific study. Because the muscular pattern is usually associated with the facial biotype, we considered that evaluating this last variable was enough to perform comparisons between groups in this type of study.

We tried to control almost all variables, such as facial biotype distribution, sagittal skeletal relationship, maxillary sagittal position parameters, sex, and age. Nevertheless, the bilateral group showed a greater facial biotype angle than the other groups. To further investigate the influence of this variable, regression analyses were performed. Then we confirmed the influence of the facial biotype angle in maxillary transverse dimensions. We understand the authors' concern regarding this topic and appreciate the reinforcement that they made to this finding. However, this influence and its clinical implications were clearly stated in the Discussion section.

It has been reported that impacted canine etiology is multifactorial.[2-4] We suggested that the facial biotype angle could have influence in the transverse dimension, generating a decrease in maxillary widths. Smaller transverse maxillary dimensions may be expected in subjects with greater facial biotype angle.[5,6] Maxillary impacted canines have been a topic of great interest for clinicians. It has been recently suggested that maxillary impacted canines and facial biotype are correlated,[7] and that the impacted canines in hyperdivergent subjects may have a better prognosis.[8] In our opinion, the facial biotype should be taken into account in patients with impacted canines not only for diagnosis but also for treatment planning. We are aware that further longitudinal research is necessary to confirm these relationships. In addition, in an ideal scenario, perfect matching of the facial biotype angle between subjects with and without impacted canines could be performed to confirm our results.

Thank you for your comments.

Nicolas Arboleda-Ariza
Juan Schilling
Luis Ernesto Arriola-Guillén
Gustavo Armando Ruíz-Mora
Yalil Augusto Rodríguez-Cárdenas
Aron Aliaga-del Castillo
Bogotá, Colombia, Talca, Chile, Lima, Perú, and Bauru, São Paulo, Brazil

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Resin-modified glass ionomer cement versus composite for orthodontic bonding: The need for standardization

We had great interest in studying the article "Resin-modified glass ionomer cement vs composite for orthodontic bonding: A multicenter, single-blind, randomized controlled trial,"[1] published in the January 2019 issue, in which the authors compared the use of resin-reinforced or modified glass ionomer cement (RM-GIC) with the use of a light-cured composite (LCC) resin when bonding orthodontic brackets. The article reports a randomized controlled multicenter study with 2 parallel groups (RM-GIC × LCC). Pre- and posttreatment photographic evaluations were

made to identify demineralized lesions and the perception of how esthetics are compromised by them. Besides that, clinical records verified the number of first-time bond failures.

We find it important to discuss 2 of the conclusions. The authors report in the first affirmation that "There was no difference in the incidence of new demineralized lesions (DLs) in patients who received fixed orthodontic appliances bonded with either a light-cured RM-GIC or LCC." However, there was no standard to follow in the methodology for the photographs, because they were taken with different digital cameras and different environmental and lighting conditions. Besides that, the examiners did not receive a standardized training to take the photographs. Therefore, it is possible for the examiners to identify and evaluate DLs in the sample, but not to make any statement about the incidence of DLs in it. It is known that to evaluate DLs, there is the need of a clinical evaluation with the tooth surface clean and dry, as recommended by the International Caries Detection and Assessment System.[2]

As for the last conclusion, in which the authors reported "potential advantages to using RM-GIC, including reduced sensitivity to moisture, reduced cleanup time, as well as lower environmental and cytotoxic impacts," it is based on information described by previously published papers[3,4] and does not express an interpretation of the results of the study, because the chosen methodology was limited to evaluating failures after bonding orthodontic brackets with RM-GIC.

Despite having used the methodology in a satisfactory manner to compare RM-GIC and LCC efficacy when bonding orthodontic brackets, the fact that there was no standard procedure to take the photographs allowed them to be used only to evaluate how white spot lesions compromise esthetics, but not to identify the clinical incidence of those lesions. This fact can influence future studies that refer to the literature in search of information about the incidence of DLs in an improper manner.

Paula Liparini Caetano
Carolina de Sá Werneck
Robert Willer Farinazzo Vitral
Marcio José da Silva Campos
Fernanda Ramos de Faria
Juiz de Fora, Brazil

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Authors' response

We thank the readers for their interest in our article and for their comments. The International Caries Detection and Assessment System (ICDAS) is an index developed for detection and classification of caries (https://www.iccms-web.com/content/icdas). The full ICDAS scores range from 0 (sound enamel) to 6 (extensive distinct cavity with visible dentin). Therefore, the full range of scores can be used to assess the severity of dental caries over time. In our study we showed our assessors the photographs from before treatment and from the day of debonding and asked them to simply decide if any new lesions, that might be due to demineralization during orthodontic treatment, were present or not. We used multiple assessors to improve validity. This equates to the ICDAS basic reporting tool of a dichotomous assessment (No/Yes obvious decay). This assesses the true incidence of demineralization (presence or absence of new lesions), but makes no attempt to determine severity. Severity was assessed with the use of a separate subjective assessment of esthetic impact by several clinicians and lay people, only after it was determined that new lesions were present.

Regarding the condition of the tooth surfaces, the before-treatment photographs were taken only after oral hygiene was considered to be sufficient for fixed orthodontic treatment. The day of debonding photographs were taken after removal of the appliances and cleaning of the tooth surface. Drying of the tooth surface might be important to improve the validity and reproducibility of the full ICDAS index scores indicating severity of lesions, but this would tend to overestimate the incidence of demineralization. We decided to examine the tooth surfaces in the natural state (ie, not air dried). We