Letter to the editor*

Low-level laser therapy

We read the article on low-level laser therapy in the April 2020 issue with great interest (Mistry D, Dalci O, Papageorgiou SN, Darendeliler MA, Papadopoulou AK. The effects of a clinically feasible application of low-level laser therapy on the rate of orthodontic tooth movement: a triple-blind, split-mouth, randomized controlled trial. Am J Orthod Dentofacial Orthop 2020;157:444-53).

This article is informative and creates great interest among readers. The effect of low-level laser therapy on the amount of maxillary canine distalization has been studied on a clinically feasible application period of 4 weeks, which coincides with the routine recall period, and hence, no additional treatment visits were required, which makes this study clinically important. However, we observed a few things during our reading that need clarification.

The study primarily aimed to investigate the effect of a 4-week application of low-level laser therapy on the rate of tooth movement. However, there are no tables or figures or any mention in the text regarding the rate (ie, millimeters per month or millimeters per week) of tooth movement.

In the Material and Methods section, under the subheading of Participants, Eligibility Criteria, and Settings, regarding the selection of eligible patients, points 3 (no previous dental or orthodontic treatment of the maxillary arch) and 4 (no previous orthodontic treatment) seem similar. Is this a repetition of the same point, or is additional deliberation required?

Under Eligibility Criteria, there was no mention of the amount of crowding, underlying malocclusions that required the extraction of maxillary premolars, growth pattern of the selected patients, presence of crossbites, etc. All these potential confounders may affect the choice of mechanotherapy and the rate of orthodontic tooth movement.

Under Interventions, the rationale behind using a modified Nance transpalatal arch (as seen in Figs 1, *B* and 2, *B*) banded to second molars and the acrylic button placed in the second premolar–first molar region was not clear; why a transpalatal arch soldered to maxillary second molars was placed is not clear.

Figures 1, *A* and *B* and 2, *A* and *B* showed that bite blocks had been placed on first molars to open the bite for canine retraction, but this is not mentioned in the manuscript. What was the requirement of this bite-block? Was it given to all patients? Was this bite-block given to facilitate canine retraction in patients with crossbites? All these factors need clarification as the bite opening may influence the rate of canine retraction and quantum of anchor loss.

Figure 1, *A* showed that the mandibular arch had not been bonded. The canines were in Class II malocclusion and molars were in Class I malocclusion, and the overjet appears to be reduced. How this patient was treated for nonextraction in the mandibular arch was not clear, as the retraction of the maxillary anterior segment would lead to a dental crossbite in a patient with these attributes. Was it done in all patients?

We request that clarifications be provided for the above questions for the benefit of the readers. We compliment the authors for their efforts and hope these points will add to the impact of this lucidly written article.

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Authors' response

We thank the authors of this letter for their interest in our study.

Regarding the rate of tooth movement, Table I reports the change from day 0 in the time-points that tooth movement was measured. As the measurements were performed every 4 weeks, the numbers reported in Table I corresponded to a rate of millimeters per month (day 0–day 28), millimeter per 2 months (day 0–day 56), and millimeter per 3 months (day 0–day 84), respectively. Dividing tooth movement into millimeters per day or millimeters per week would have given minuscule numbers that would be of no importance. We considered that reporting the numbers, as in Table I, was more meaningful for all involved in the clinical process, meaning treating clinicians and those receiving treatment.

Regarding the second point, we agree this is a minor repetition. We could have included in 1 sentence that there was not any previous orthodontic treatment in the maxilla and overall.

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