Authors’ response

We want to thank Drs Fang and Li for their interest in our article and take this opportunity to clarify some issues on the methodology and interpretation of our results.

In regard to the first point, the experimental design of the study was based on patients who required premolar extractions. Patients with moderate lack of space and dental protrusion—as shown in the figures—were considered to have severe crowding, since no option other than premolar extraction is appropriate (intraoral photos and lateral cephalograms have been provided to the editor).

In regard to the “location of the crowding” comment, the presence of an intra-arch obstacle in the movement of the experimental tooth was independent of the amount of the crowding in the arch. Therefore, we did not attempt to relate the tooth movement to the general space conditions in the arch, but we chose to assess whether the experimental tooth could move freely during the experimental period.

In regard to the second point, we agree that the continuity of the force could be important for experimental tooth movement. However, instead of reactivating the archwire weekly, we chose a force level of 100 cN to give a greater force decay tolerance margin for the 4-week period. When the amount of force was measured after 4 weeks, the force level did not drop below 50 cN for any patient. Therefore, the range of force levels equivalent to those applied by Owman-Moll et al were ensured during this 8-week period. Additionally, in the Owman-Moll study, which was similar to our study, no statistically significant differences were observed in the amount of tooth displacement when the applied force ranged from 50 to 100 cN.

In the last point, Drs Fang and Li stated that “it might be disputable to consider that younger subjects showed greater tooth movement velocity than did older subjects.” This is correct if the rates of tooth movement between younger and older participants were compared by using a univariate approach such as a t test. However, in our analysis, we implemented a multivariate regression model in which we adjusted for confounders such as age, sex, and tooth location; therefore, we believe that Drs Fang and Li’s criticism is groundless. We refer Drs Fang and Li to Table II in which the results of the adjusted model are reported.

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REFERENCE