

## Letters from Our Readers

**To Editor: *The Angle Orthodontist***

**Response to: Effect of continuous versus intermittent orthodontic forces on root resorption: A microcomputed tomography study by Nurhat Ozkalayci; Ersan Ilsey Karadeniz; Selma Elekdag-Turk; Tamer Turk; Lam L. Cheng; M. Ali Darendeliler., *Angle Orthod* 2018; 88: 733-739.**

We thank Drs Brezniak and Wasserstein for their comments.

We believe that the best explanation of hard tissues reacting under mechanical loading was defined by Frost<sup>1,2</sup> where he underlined upper and lower thresholds indicating where the bone remodelling starts and where pathologic reactions occur. "Defense mechanism" mentioned by Drs Brezniak and Wasserstein may be valid for any biological organ / tissue but there is no evidence in terms of when the reaction of tissue is reversible or irreversible. There are evidences on the impact of the duration and intensity of pressure on root resorption. There are also a significant number of studies on the repair of root resorption when the orthodontic pressure is stopped.<sup>3-6</sup> However, we do not know yet how long the reparative process continues for and the extent of repair. In addition, it has been shown in our previous published evidence-based research on unerupted third molars,<sup>7</sup> that root resorption craters are detected even without orthodontic loading which indicates root resorption is also present as part of physiological remodelling of hard tissue and not merely a "defense mechanism". As researchers, we do not make philosophical comments, but instead we meticulously plan and undertake research studies and then interpret our results to make conclusions based on scientific evidence. Therefore, we should continue to use the terms such as apposition, resorption and repair when describing root resorption until it is scientifically proven that root resorption is the same as our body's defense mechanism.

Finally, the lowest amount of root resorption that was found in the apical zone in both groups could be due to two reasons. First of all, the surface area of the apical

third of the root was less than the middle and cervical thirds of the root. Subsequently, the amount of root resorption would be less. In addition, the apical third of the root is composed of more cellular cementum in comparison to the middle and cervical third. Therefore, the root resorption repair potential would be better at the apical third of the root and hence less root resorption.

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