

Letters From Our Readers

To: Editor, *The Angle Orthodontist*

Re: Comparison of orthodontic root resorption of root-filled and vital teeth using micro-computed tomography. Kadir Kolcuoğlu and Aslihan Zeynep Oz. *Angle Orthod.* 2020; 90: 56-62.

We read this article comparing orthodontic root resorption between root-filled and vital teeth using micro-computed tomography after orthodontic force application with great interest. It is important to point out that the study did not examine the baseline of root resorption before treatment. Although root resorption is a common adverse effect of orthodontic treatment, it is also present in individuals without orthodontic treatment. In addition to orthodontic treatment, the etiologic factors that cause root resorption include trauma, impacted teeth, idiopathic causes, etc. Do you think having baseline data would improve the impact of this study?

Specifically, as shown in Figure 2A, the original contour and outline of the root before treatment was unknown. Thus, the outline of the root before treatment shown in Figure 2B was arbitrary and should not be the reference for calculating the root-resorption volume.

Additionally, in this study a 150-g buccally directed force was used to induce buccal tipping of the premolars, but comprehensive orthodontic tooth movement is complex, including tipping, bodily movement, rotation, intrusion, extrusion, etc. Intrusion and lingual root torque have been shown to be the strongest causative factors for root resorption.¹ Thus, the results of this study are only limited to tipping movement and cannot be extrapolated to other tooth movements or to comprehensive orthodontic treatment.

Jing Zhou, Qianyun Kuang, Lu Liu, Hu Long
Department of Orthodontics, State Key Laboratory of Oral Diseases & National Clinical Research Center for Oral Diseases, West China Hospital of Stomatology Sichuan University, Chengdu, China

REFERENCE

1. Weltman B, Vig KWL, Fields HW, Shanker S, Kaizar EE. Root resorption associated with orthodontic tooth movement: a systematic review. *Am J Orthod Dentofacial Orthop.* 2010; 137:462–476.