

Letters From Our Readers

To: Editor, *The Angle Orthodontist*

Re: Evaluation of root resorption in the lower incisors after orthodontic treatment of skeletal Class III malocclusion by three-dimensional volumetric measurement with cone-beam computed tomography. Junjie Chen, Ruoyu Ning. *The Angle Orthodontist*. 2023; 93: 320–327.

Thank you for publishing this complex study. The authors spent a significant amount of time and effort in completing it. It is with great interest that I would like to ask some questions and make comments related to the study:

1. Previous studies have shown patient- and treatment-related root resorption risk factors include blunt and short roots, intermittent elastics, and orthodontic mechanics used. In Class III patients with preexisting short root anomaly, did the authors observe significant worsening of the root length compared with teeth without this preexisting characteristic? In addition, were all patients compliant with wearing Class III intermaxillary elastics? Intermittent use of elastics produces jiggling forces, which may contribute to root resorption at T_1 .

2. Could you provide a breakdown of the number of adults in the study who had a true Class III malocclusion versus a pseudo-Class III? In pseudo-Class III, patients present with heavy anterior contacts causing mandibular displacement. Intermittent occlusal trauma on lower incisors may cause widening of periodontal ligament space, mobility, and increased likelihood of root resorption. It would be interesting to note in this study whether the presence of anterior crossbites and displacement predisposed subjects to an increased risk of root resorption.
3. Referring to Table 1, data on pretreatment mandibular plane angle (MMPA) was not described. Class III subjects with steep mandibular plane angles are frequently associated with thin mandibular cortical plates. Consequently, with less alveolar housing available for the teeth to move, there is a greater chance of root resorption occurring during retraction.

Thank you very much for your time and clarification of my questions and comments.

Chieh S. Koo

Associate Consultant, Dental Service, KK Women's and Children's Hospital, Singapore