## **Letters From Our Readers**

## To: Editor, The Angle Orthodontist

Re: Mini-implant supported canine retraction with micro-osteoperforation: A split-mouth randomized clinical trial. Saritha Sivarajan, Jennifer Geraldine Doss, Spyridon N. Papageorgiou, Martyn T. Cobourne and Mang Chek Wey. *The Angle Orthodontist*. 2019; 89: 183-189.

Thank you for publishing this interesting study.

In this study, sliding mechanics was used to retract the canines. It is known that retracting the canines with this method is relatively slow due to resistance of sliding (RS) throughout the course of movement. One of the most important components of RS is friction which can arise from ligation, binding of the archwire at the corners of the bracket and from the couple generated within the bracket. The higher the moment, the more frictional forces generated. In some instances, appliance ankylosis could occur. In addition, the size and the stiffness of the archwire can lead to increased friction. The authors used 0.018  $\times$  0.025inch stainless steel which might lead to less tipping but higher frictional forces due to higher counter-moments related to higher stiffness and force/deflection values when compared to round archwires. Therefore, because a relatively small difference was being assessed (millimeters), any biological responses with or without MOP will be handicapped due to this mechanical confounding factor that is always overlooked under the claim of standardization. Because measuring friction clinically and accounting for it statistically are impossible, would it perhaps be better to use frictionless mechanics instead in future studies?

Why were parametric tests used (i.e. ANOVA) to compare the results even though the number of patients in each group was small (n = 10)? The standard deviations were high for the means presented and this means high dispersion in the data. Non-parametric tests should have been employed but less sensitive and this could change the results. Your comments on this would be appreciated.

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