Letters From Our Readers

To: Editor, *The Angle Orthodontist*

Re: Response to: A comparative study between currently used methods and Small Volume Cone Beam Tomography for surgical placement of mini implants. Melissa Landin, Aniket Jadhav, Sumit Yadav, Aditya Tadinada. *The Angle Orthodontist.* 2015;85:446–453.

Thank you Doctors Kalra and your colleagues for your interest in our work. Our group is also very happy to note your appreciative comments. What you have brought to attention are some good pointers:

Question: In the paper, there were two questions that arose regarding the methodology described. As suggested by Poggio et al.[1] and Deguchi et al.,[2] the recommended dimensions of mini implants to be placed in interradicular areas is 1.2–1.5 mm in diameter and approximately 6–8 mm in length. However, we did not find any mention about the diameter of mini-implants used in this study. Larger diameter mini-implants could have a greater chance of making contact with adjacent roots.

Response: *The dimension of the mini-implant used in this study was 1.6 mm in diameter and 8 mm in length. We agree that smaller the length and diameter of the implant, the lesser the chance of perforation, but that is assuming that there is approximately 2–3 mm of width clearance between the roots of that particular patient. The key take home from our study is that individuals can be different and it's very challenging to generalize the TAD site's location not knowing if they are the exception. Patient centric care with risk mitigation using a reasonable radiation exposure that leads to successful outcomes is a good approach for providing superior care. However, we cannot decrease the diameter below a certain measurement as it will decrease the bone-implant contact thus jeopardizing the stability of the mini-implant.*

Question: Another question which we would like the authors to answer is how they used the information from CBCT images of the interradicular area to determine clinically the site of mini-implant placement. It was mentioned in the methods that the potential site for mini-implant placement was determined on axial view of the CBCT acquired image but how was this information used to place the mini implant at the predetermined site? In the literature, either 3D guides or SLA models have been used for placement of mini-implants using CBCT.[3-5] Alternately, a reference landmark such as an orthodontic archwire has been used to determine clinically the potential site as determined on CBCT images.[6] We would appreciate if the authors could share their views.

Response: *What Dr. Shilpa Kalra and Dr. Tulika Tripathi have brought up is an important consideration which is a potential future direction. The use of a radiographic guide which can be used a stent for the TAD placement is a practical way to approach the concern. In our study, we have used the information derived from all the three multi-planar views to localize the desirable location and these measurements were used to physically create a reference point on the simulated soft tissue as bleeding points that served as entry points for implant placement. In the opinion of our group the use of any metallic objects like orthodontic archwire, etc, can cause a severe streak artifact that can often times obscure the area of interest. We suggest the use of a plastic/non metal based material to serve as guide point or a fiduciary marker in three dimensional imaging using x-rays.*

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6. Kalra S, Tripathi T, Rai P, Kanase A. Evaluation of orthodontic mini-implant placement: A CBCT study. *Prog. Orthod*. 2014;15:61.