



# THE *Yin-Yang* ATTACHMENT: The Clear Path to Molar Zen

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*‘At the moment of surrender, a vision over visibility...’ – Paul Hewson*

Align Technology’s commitment to eliminating brackets from the landscape of the orthodontic discipline is imitable and unparalleled. Likewise, the private practitioner’s yearning for constant improvement is unwavering. These two forces can be both complimentary and antagonistic simultaneously. Much like the Chinese philosophy of Yin and Yang, their interaction is thought to maintain the harmony of the [orthodontic] universe and to influence everything [each other] within it. The net result often is the advancement of the orthodontic discipline, like a rising tide lifting all boats.

The generational improvement known as G6 was created by Align to address molar anchorage and molar protraction in bicuspid extraction cases. Due to the mass customization and scalability of the appliance, as expected, certain limitations and parameters must be imposed to limit variabilities that would otherwise make discerning what goes wrong a monumental task. It is the application of the scientific method at its finest. Currently, G6 parameters limit mesial molar movement to 2mm or less. If certain thresholds are not met, G6 will not be applied and cannot be customized as it is an ‘all or none’ solution.

The private practitioner is often faced with mesial molar movement greater than 2mm. Since the G6 solution cannot be applied, the private practitioner must be the yin to Align’s yang and push the limits applying sound principles of tooth

movement taken for granted everyday with fixed appliances.

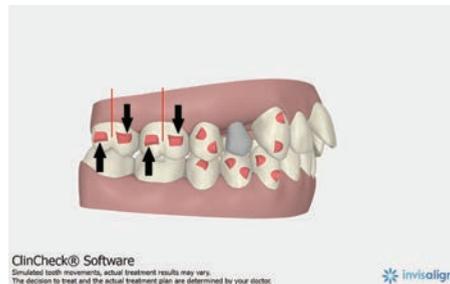


FIG 1

The unmet clinical need is when moving molars mesially greater than 2mm, we must design our appliance force system to render a center of rotation within the clinical crown to affect mesial root tip. Furthermore, our clinical experience has proven that control of the vertical dimension is as important as the sagittal movements. When using fixed appliances and closing loop arch wires, we routinely gable bend in the extraction site area, tip the mesial of the bracket slightly apical to get the extra mesial root tip when the wire is inserted and finally use a hollow-chop plier to swipe curve in the closing loop arch wire to prevent dumping or bowing of the arch during space closure.

As such, a twin attachment (Fig 1) should be employed on molars to impart of the forces necessary for the mesial root tip. Clin Check Pro may be utilized efficiently to ‘dial-in’ the desired amount of mesial root tip. This twin attachment

best mimics the arch wire binding in the slot in that when a molar moves mesially it tips, the bracket slot binds the wire, uprights the roots and repeats. Hence, the molar sort of ratchets along the wire. The Yang/Yin twin attachment on molars best mimics the wire/bracket binding forces that uprights the roots mesially. Finally, the clincheck must be designed to mimic using the hollow-chop plier to swipe curve in the wire to manage the vertical dimension. Accordingly the second molars need to be intruded 2-3mm each followed by the first molars 1.5-2.5mm each and the second bicuspids 1-2mm each rendering a posterior open bite in the final stage of the clincheck with freeway space between the opposing occlusal surfaces.

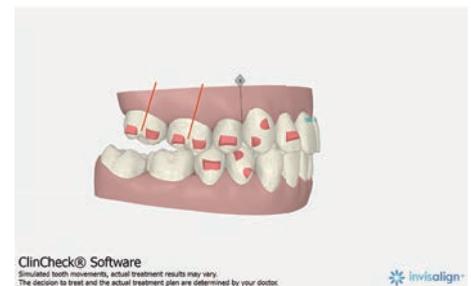


FIG 2

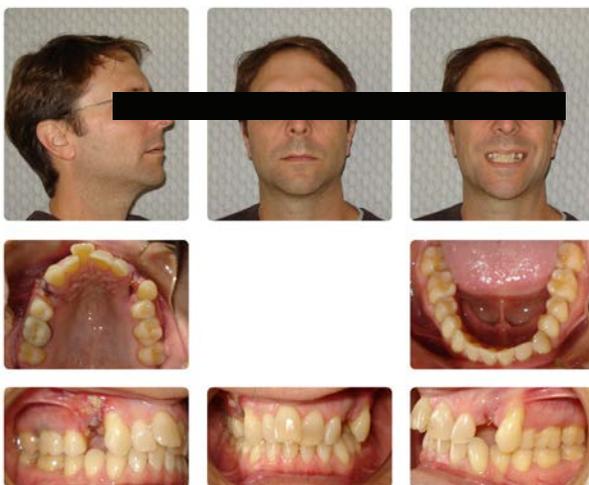
The final image is no different than the curve and reverse curve placed in the upper and lower arch wires rendering a perfect final occlusion. Yet, if untied and placed on the bracket table, their form and appearance would look excessive to what we see clinically in a similar fashion to the view of the final stage in clincheck.

At the moment when all hope is lost and you have surrendered, U2 can have clairvoyance and the vision to translate the action of fixed appliances to lexicon of aligner therapy rendering tooth movements previously thought of as impossible as common place. The mindset that allowed our discipline to transition from banded to direct bonded appliances, must now continue to 'attach' its beliefs to the fundamental principles of physiology of tooth movement regardless of the appliance system chosen. As Confucius once said, *we may learn wisdom by three methods: First, by reflection, which is noblest; Second, by imitation, which is easiest; and third by experience, which is the bitterest.*

Instructions for Communication: Twin attachments on the molars. Mesial half: 2mm wide horizontal rectangular beveled occlusal 1.25mm thick and tapering into the crown without a ledge, Distal half: 2mm wide horizontal rectangular beveled gingival 1.25mm thick and tapering into the crown without a ledge.



12 MONTH PROGRESS  
NOTE BUCCAL OPEN BITE



INITIAL

Superimposition of first CC: Note the MRT dialed into the upper 6,7's. The mistake made by bitter experience is that they are moved forward on the same plane as the occlusal plane. This led to the 'bowing' effect. No different than making a closing loop arch wire and never wiping a curve in it with a hollow chop plier.



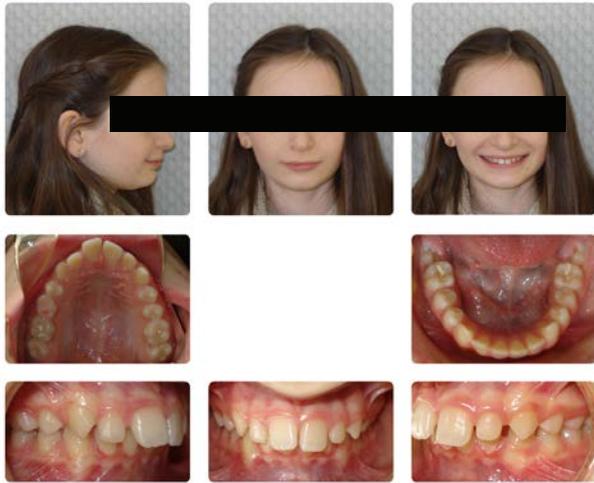
REFINEMENT INITIAL  
STAGE



REFINEMENT FINAL STAGE:  
NOTE CURVE PLACED IN THE  
UPPER WIRE WITH POSTERIOR  
FREEWAY SPACE



23 MONTHS OF TREATMENT:  
REFINEMENT 2



INITIAL



11 MONTHS IN CR SCAN



INITIAL CEPH



11 MONTHS OUTCR SCAN



START WITH MARA



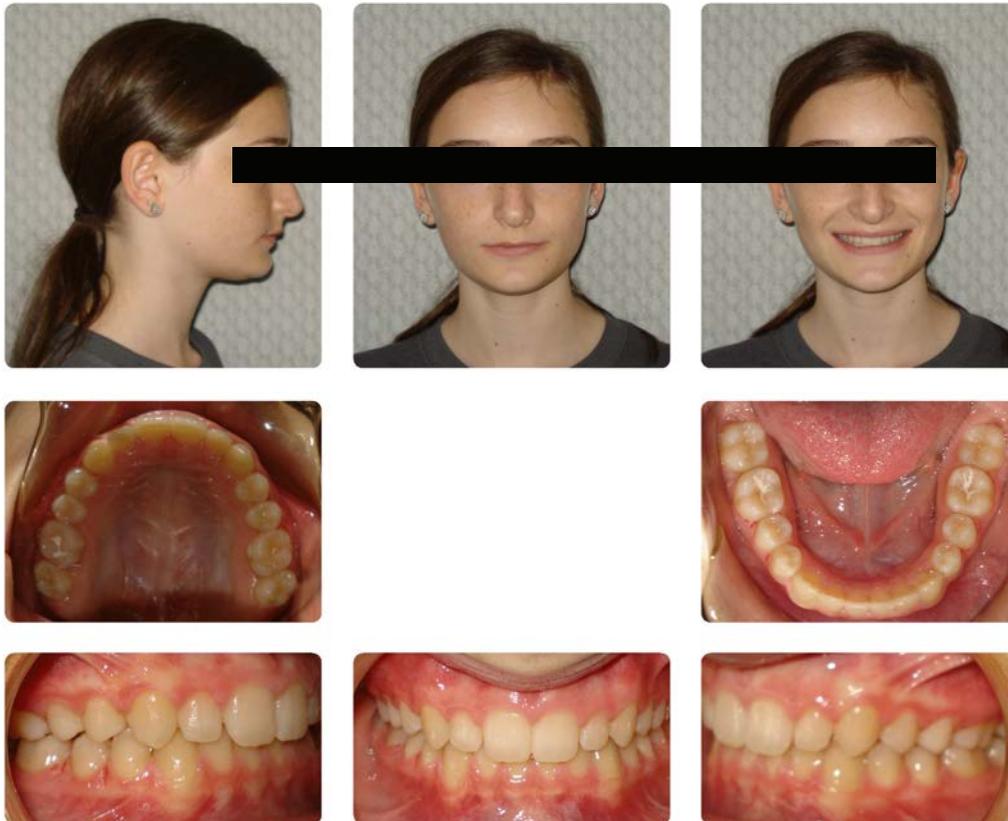
11 MONTHS MARA REMOVAL SCAN



INITIAL 11 MONTHS



13 OUT YING-YANG USED TO MOVE LOWER MOLARS



11 FINAL