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# The Ang 180° Technique: Solving Difficult Rotations in An Easy Way

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## Abstract

In our specialty, dental rotations are, in most cases, an uncomfortable clinical issue which demands even more treatment time that, neither doctors nor patients, wish to have.

In this article, a step-by-step easy way to correct dental rotations is presented. This relatively easy technique brings about solutions, even for those pieces which are almost in a complete 180° incorrect position, without any auxiliaries.

Regardless the chosen technique, Key IV of Andrew's Six Keys of normal occlusion [1] becomes, sometimes, difficult to achieve.

In most rotation cases, the couple technique is the chosen one to solve them.

This technique works very efficiently and quickly in cases where there are no extremely complex rotations, and most importantly, it can be used with conventional or self-ligating brackets as well as with lingual ones and even with a sectional prior to an aligner treatment.

Nevertheless, if a bicuspid is completely rotated, a good alternative would be to leave it in that position. It would not bring about any functional or aesthetic problems, or at least none which we could not solve by adding material or removing enamel.

However, when the tooth is fully rotated, occupying more space than it should, the "ANG (Anghileri) 180° Technique" solves this problem, thanks to the use of constant soft forces, without the need of adjustment in every appointment.

This technique requires the following steps:

1. Bond two buttons on the rotated tooth. One on the palatal surface and the other on the buccal one (or at least, on the nearest possible position of the aforementioned) (Figure 1):
2. Place a passive Niti open coil spring between the two teeth on both sides of the rotated tooth (Figure 2):
3. Thread an elastic chain to the archwire, mesial or distal to the spring, depending on how the tooth needs to be rotated. This can be done by passing Mathieu pliers through the first link and taking the other tip of the chain under the wire. Then, grabbing the loose end and pulling it to form a knot around the archwire (Figure 3):
4. Stretch the power chain, compressing the spring between ⅓ and ½ of its original length to generate a 50/75 gr. force. The elastic chain must go gingivally to the buccal button (to avoid displacement) and finally engage, the palatal button (Figure 4):
5. Control the derotation in the next appointments, and when convenient, adjust the elastic chain one link more from the palatal button (Figure 5):

***Figure 1:*** Two buttons bonded on the rotated tooth.

***Figure 2:*** Passive Niti open coil spring.

***Figure 3 a-b-c-d-e:*** Thread an elastic chain to the archwire with a Mathieu plier.

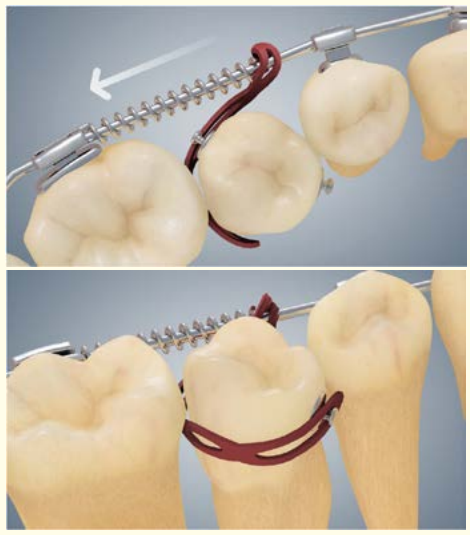

***Figure 4 a-b:*** Stretch the power chain to engage it in the palatal button.

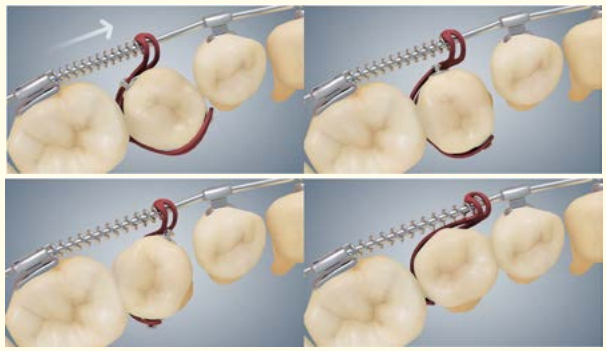

***Figure 5 a-b-c-d:*** Control and adjustment of the elastic chain.

Once the correction has been achieved, a bracket must be bonded allowing the treatment to continue.

In the following case a severe rotation of a second upper bicuspid can be observed. The tooth occupies more space than it should, therefore providing neither aesthetics nor function (Figure 6).

The day of initial bonding, and after having placed a Cuniti 0,013" arch, the two buttons were bonded. One on the palatal surface, and the other one on the best possible position the rotated tooth allows, in this case, the mesiobuccal surface of the bicuspid.

The power chain is threaded to the archwire mesial to the spring to derotate that bicuspid. (Figure 7). Ideally, the tooth where the spring is going to be anchored must have a greater anchorage than the rotated one to avoid an unwanted rotation. In case it is necessary, bite turbos can be placed to avoid the interference of the occlusion with the technique.

***Figure 6 a-b:*** Initial position of the second upper bicuspid.

***Figure 7 a-b:*** ANG 180° Technique the bonding day.

The first- and second-month evolution show how the elastic chain and the spring work, allowing the movement of the bicuspid to the desired position effortlessly. If necessary, the power chain can be changed or be activated from palatal (Figure 8 and 9).

***Figure 8 a-b:*** ANG 180° Technique: One month evolution.

***Figure 9 a-b:*** ANG 180° Technique: Two month evolution.

Three months later the bicuspid, which is already aligned, can be directly engaged with a round wire and a bracket. The ANG 180° Technique did not interfere with the neighboring teeth. The space observed is the one generated when the tooth achieved the right place (Figure 10 and 11).

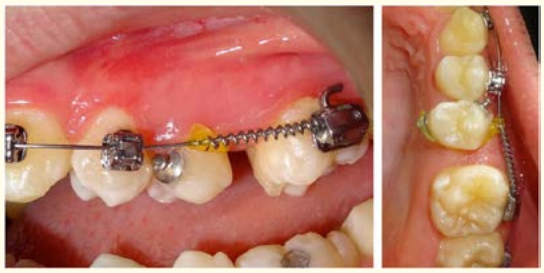

***Figure 10 a-b:*** ANG 180° Technique: Three month evolution.

***Figure 11 a-b:*** At the 3 month appointment the bracket is bonded on the almost perfectly positioned bicuspid. Distal to it, the space generated due to the derotation can be observed.

Controlling severe tooth rotation does not have to involve complex mechanics that may prolong treatment time. The "ANG (Anghileri) 180° Technique" employs simplified and yet effective mechanics to solve difficult tooth rotation without sacrificing patient comfort or treatment time.

## References

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