In conclusion, I would like to comment on a patient that re-visited the practice recently and caused me to reflect on brackets. My office had seen this patient several years ago for an initial orthodontic consultation and the family elected to go with another orthodontist in the area. I had thought nothing more about the case until they recently showed up at my practice. The patient has been in appliances for over two years and there has been little progress. The patient was bonded with a leading self-ligating bracket and as you can see there has been minimal progress over the course of a two year treatment.

Two years of treatment: self ligating

Why do I bring this up? Because the bracket is not the doctor. The bracket can’t diagnose, can’t treat, and can’t cure the case. The patient should not be asking for a specific bracket, nor should the marketing of a specific bracket be the place of any practice. Even a fantastic bracket is worth little if the doctor lacks the knowledge or skill to treat the case. The bracket should be a tool to aid the doctor in accomplishing the goal of moving the teeth in a faster, easier, and more comfortable way.

“Synergy R® can make all these things easier...”

CASE 6

Patient presented with a Class II, division 2 malocclusion, deep bite, rotations, and a poor arch form. The treatment plan was to open the bite by leveling the Curve of Spee, improve the arch form. The treatment plan was to open the bite by leveling the Curve of Spee, improve the arch form. The treatment plan was to open the bite by leveling the Curve of Spee, improve the arch form. The treatment plan was to open the bite by leveling the Curve of Spee, improve the arch form. The treatment plan was to open the bite by leveling the Curve of Spee, improve the arch form.

After 16 weeks of treatment, the arch forms were significantly improved and the patient was ready to move into working wires and Class II mechanics.

The bracket should be a tool to aid the doctor in accomplishing the goal of moving the teeth in a faster, easier, and more comfortable way.

“Synergy R® brackets offer a frictionless design”

References


Synergy®® a clinical pearl

RMO® Synergy®® bracket System is a new and unique frictionless bracket system utilizing covered slots on all cuspid and bicuspids (figure 1) as well as a frictionless anterior ligation tie setup using Synergy®® brackets (figure 2). Synergy®® brackets offer a frictionless design without the hassle of doors while still providing patients with the most loved ligation colors at the later treatment stages. However, as with all new and improved technology come challenges. With the Synergy®® bracket the challenge is presented at the initial bonding, when placing the brackets on the archwire. As with most orthodontic cases, the interbracket mesial to distal distance can be very small, and/or have rotational angles that exceed 45 degrees, and/or have a height difference of several millimeters (figure 2). Using Synergy®® brackets to treat these cases works well when full wire engagement in the brackets occurs. Complete wire engagement in Synergy®® brackets requires the “threading” of the wire between and through each bracket (figure 2).

In this article we describe a technique that utilizes the natural flexibility of Ni-Ti to fully engage the archwire. This technique results in complete expression of the wire and best utilizes the frictionless environment provided by Synergy®® brackets.

“Synergy R® brackets offer a frictionless design”

Procedure

Starting the wire sequence with a .014 Thermaloy® Plus archwire is preferred for the material property benefits. The .014 Thermaloy® Plus wire works well due to its flexibility, ability to regain its initial shape after placement, and adequate force level.

The focus of this technique is wire insertion/threading through cuspid and bicuspide brackets, because the greatest challenge is to “thread” the wire from 1st to 2nd bicuspide, and/or from 2nd bicuspide to 1st molar. The following four-step sequence describes this process:

Step 1. Push the wire through the bracket until you can see it coming out the distal part of the bracket.

Step 2. Place a scaler on the distal part of the bracket behind the wire and grab an anterior part of the wire with an Hemostat.

Step 3. Push the wire buccally with the scaler while simultaneously pushing distally on the wire with the Hemostat. This will allow the wire to come through the slot. Push an ample amount of wire through this will be your working wire. Usually the length of two bicuspides is enough.

Step 4. Glands the wire with the Hemostat and thread it through the next tube. The wire will curl back around on itself. The extra wire allows for flexibility and if the wire is damaged during this step you can remove the damaged area.

Step 5. Push the wire through the bracket until you can see it coming out the distal part of the bracket.
Discussion

This simple four-step procedure works well in most cases to allow full wire engagement in the most difficult bracket placements (figure 3). However, if there is less than 2 mm interbracket distance, the technique is not as effective. This is due to either not having enough wire flexibility to complete the threading or not having enough free movement to allow the torque built up in the wire twisting to be released. A semi-permanent curl can result in the wire (figure 4) until more room is available.

Another challenge that occurs at initial bonding is when the distal bracket slot is pressed against the adjacent tooth, not allowing room for the wire to slide through the slot. This can easily be overcome with bracket placement and a reposition later in treatment.

Conclusion

By following a simple procedure, full arch wire engagement is achieved in Synergy R® brackets unless there is an extreme case of anatomy misalignment. The full functionality of the frictionless Synergy R® bracket system is expressed at the initial bonding.

Features and benefits include:

• cuspid and bicuspid brackets feature an integrated convertible cap
• can reduce treatment time and appointment intervals
• no moving parts—no broken clips, doors, or slides
• large flared lead-ins reduce kinking and binding
• low profile—comfortable for your patient
• convert to a standard Synergy®-style bracket at any time for advanced FSC® modes