Effectiveness of the 3M™ Incognito™ Appliance System and the ribbon archwire in the treatment of deep bite cases.

Introduction

Today, patients look for orthodontic treatment with appliances that are invisible to the people around them. In order to satisfy this patient’s request, we could count on clear tray aligners, which are highly aesthetic but sometimes mechanically inefficient to achieve certain tooth movements. We could also count on lingual braces, which are more predictable and have wider mechanical reach.

The following case shows the 3M™ Incognito™ Appliance System and the effectiveness of the ribbon archwire feature of the appliance in the correction of a severe deep bite. Ribbon archwires are vertically much stronger than edgewise archwires, and for that reason, the correction of a deep bite through intrusion of the anterior segments is feasible.

Diagnosis

A 26-year-old male, dental and skeletal Class I with lower anterior crowding, upper incisors palatoversion and severe deep bite due to extrusion of the upper and lower anterior segments.

Figure 1: Initial lateral X-rays.

Dr. Jair Lazarín

Dr. Jair Lazarín received his post graduate Certificate in Orthodontics in 2005 from “Dr. Manuel Gea González” Hospital in Mexico City. In 2009, he received his Master’s Degree in Biomaterials Science from the Mexican National University, UNAM, and is continuing with Ph.D. studies in clinical research at the same university.

Since 2005, Dr. Lazarín has been working at his private practice in Mexico City. He has lectured across Latin America about orthodontics, Class II treatment, self-ligation, distraction osteogenesis, orthognathic surgery and the 3M™ MBT™ Versatile+ Appliance System philosophy. He joined 3M in 2010 as professional services manager for Latin America.
**Treatment plan**

A non-extraction approach was selected for this patient. In order to correct lower arch crowding, IPR and dental proclination was planned, also upper incisors where supposed to procline and in order to correct the deep bite, intrusion of the upper and lower incisors was planned.
Treatment phases
IPR was performed and initial aligning was done using .012 Nitinol wires using the self-retaining tie-wings in the lower 3-3 brackets and overties on the upper 3-3 (Figure 7A and Figure 8A).

Once initial aligning was completed, rectangular Nitinol wires were used in order to start anterior segments intrusion, after that .016×.024 SS wires were placed to complete the intrusion, the upper one had extra torque to achieve proper inclination of the upper incisors (Figure 7B and Figure 8B).

Finishing stage was done with .0182×.0182 Beta III wires and after proper overbite and overjet were achieved braces were removed (Figure 7C and Figure 8C).

Comments
The Incognito Appliance is very predictable regarding the treatment outcome. The ribbon archwires are much stronger in the vertical aspect than edgewise archwires. It is logical then that the Incognito Appliance is an optimal resource for the orthodontic treatment of deep bite cases.

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Case photos provided by Dr. Jair Lazarín.