Case Report

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Treatment of class II division 1 with carriere distalizer

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Ahmed Marghalani
Al-Farabi College, Saudi Arabia

Correspondence: Ahmed Marghalani, Al-Farabi College, Al-Rahmanya Road, Jeddah 23642, Saudi Arabia, Email ahmad_marghalani@hotmail.com

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Introduction

Non-extraction treatment of Class II malocclusion frequently requires upper molar distalization into a final Class I relationship. The creation and use of intermaxillary intraoral appliances for molar distalization in Class II malocclusion have been made possible through advancements in biomechanics and technology and materials that have allowed the delivery of light and constant forces over a wide range of deactivation.[1] The carrier Distalizer is efficient and simple appliance for Class II treatment and achievement of Class I molar and canine relation in the beginning of the treatment.

Case report

Examination

An 11 years old female reported with chief complaint of space between upper and lower front teeth. Extra oral examination showed brachycephalic face type with convex profile. Nasolabial angle was normal and lips were competent (Figure 1). Intra oral examination showed Class II molar and canine relations, overjet 8 mm, overbite 4 mm and adequate space in both jaws (Figure 2).

Figure 1 Brachycephalic face, convex profile, normal nasiolabial angle and competent lips.

Figure 2 Class II molar and canine relations, overjet 8 mm, overbite 4 mm and adequate space in both jaws.

Radiographic evaluation

Cephalometric analysis revealed skeletal Class II tendency and low angle; proclined and protruded upper incisors, proclined and retruded lower incisors (Figure 3). Panoramic radiograph showed full complement of dentition with 3rd molars in crown formation stage (Figure 4).

Figure 3 Cephalometric radiograph.

Figure 4 Panoramic radiograph.

Diagnosis

Skeletally Class II tendency and low angle. Dentally Class II division 1

Treatment objective

To obtain good facial balance, reduce the overjet and achieve Class I molar and canine relationship.

Treatment plan

Molar distalization with Carriere Distalizer then fixed appliance.

Treatment progress

Carriere Distalizer was bonded in the upper jaw both sides. Buccal tubes were bonded on tooth #36 and #46 in the lower jaw with Essix retainer (buccal tubes areas were removed from the essix retainer). Class II elastics ¼ medium light were used. Carriere Distalizer was used for 5 months (Figure 5) until over distalization achieved to allow some relapse when changing to fixed appliance (Figure 6). Fixed appliance was used in both jaws for 1 year after removing the Carrier Distalizer then she was debonded (Figure 7).

Figure 5 Carriere Distalizer bonded with essix in the lower jaw and class II elastics ¼ medium light.

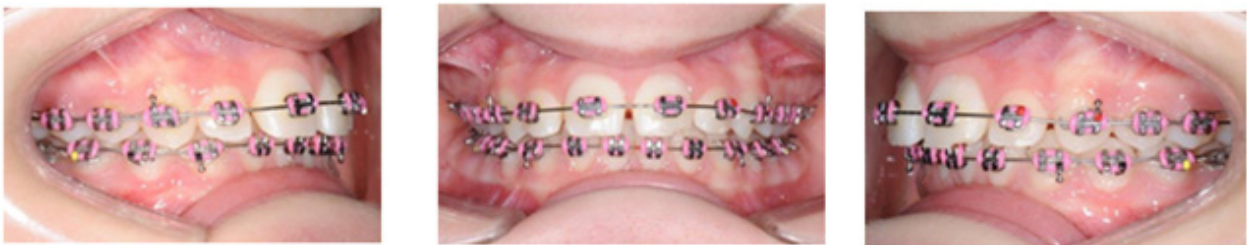

Figure 6 Bonded both jaws after over distalization as achieved.

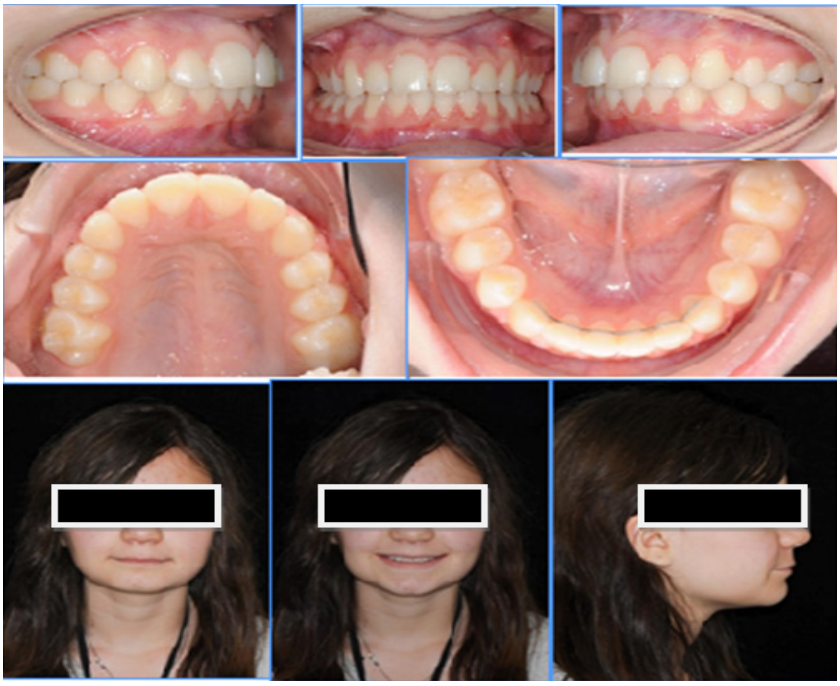

Figure 7 Post-treatment photos (Intra and extra oral).

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Treatment results

Molar and canine Class I relation was achieved. Overjet was reduced. Lower incisors were proclined. Patient's profile was harmonious (Figure 8).

Figure 8 Post-treatment cephalometric radiograph.

Discussion

Carriere Distalizer is easy and convenience appliance to establish Class I molar relation in the beginning of the treatment, which can reduce treatment time in Class II non-extraction cases. The Distalizer is most effective in treating Class II malocclusions without extractions. Brachyfacial patterns respond best to treatment; dolichofacial types are less responsive. The appliance can also be used in many Class I cases with mesially positioned maxillary molars or, with caution, in Class I cases with premaxillary hypoplasia. Growing patients are ideal, but adults can be treated as well. Mixed dentition Class II cases with fully erupted first molars are candidates for first-phase treatment.Possible sources of anchorage are mandibular lingual arch, full mandibular fixed appliance, lower essix appliance (hooks for the elastics placed on the lower molar region), and miniscrews.[2] Other distalizing appliances could have been used for molar distalization but would have required earlier bracket placement, mesial movement of the anterior teeth and anchorage loss.[3] Carriere Distalizer is also more effective in achieving controlled derotation of the first molar. It rotates the maxillary first molar around its palatal root while producing bodily distal movement, before other appliances have been placed.[2]

It allows for straightforward Class II correction prior to orthodontics (fixed or clear aligners) at a time when no other mechanics interfere, and compliance is at its best.[4] Carriere Distalizer appears to be more comfortable, offer a more positive overall experience, and has fewer negative side effects compared to the Forsus Fatigue Resistant Device.[5]

Acknowledgements

None.

Conflicts of interest

None.

References

1. Sfondrini MF, Cacciafesta V, Sfondrini G. Upper molar distalization: a critical analysis. *Orthod Craniofac Res*. 2002;5(2):114–126.
2. Carriere L. A new Class II Distalizer. *J Clin Orthod*. 2004;38(4):224–231.
3. Ghosh J, Nanda RS. Evaluation of an intraoral maxillary molar distalization technique. *Am J Orthod Dentofacial Orthop*. 1996;110(6):639–646.
4. McFarlane B. Class II correction prior to orthodontics with the carriere distalizer. *Int J Orthod Milwaukee*. 2013;24 (3):35–36.
5. Hamilton CF, Saltaji H, Preston CB, et al. Adolescent patient's experience with the Carriere distalizer appliance. *Eur J Paediatr Dent*. 2013;14(3):219–224.

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