

activated unilaterally and both first molars were distal driven. The first molars were then locked in position with new arch wire locks.

The distalizing springs and arch wire locks were then placed mesial to the first bicuspids. Both the first and second bicuspids were bilaterally driven to contact the first molars. The ligation of the bicuspids was in the minimum configuration reducing the friction. (Fig. 19, 20 & 21)

The mandibular cuspids were next retracted using 3/16", 4 1/2 oz. elastics from the cuspids to the first molars. Note the arch wire lock mesial to the lower first molar and the Delta Force rotating wedge on the distal of the upper cuspid. (Fig. 22)

After bilateral cuspid retraction was fully completed steel ligature wire was tied from the first molars through the cuspids and the arch wire locks removed mesial to the first molars. A six unit chain elastic was placed cuspid to cuspid to retract the lower incisors and correct the dental midline. (Fig. 23, 24 & 25)

Once the upper arch development was completed the ALF appliance was removed. The upper .020 x .020 multi-quadrant thermal Niti arch wire

was replaced with a .018 x .025 steel arch wire. Elastics were worn from the upper first molars to the Reverse Pull Head Gear. These elastics were 5/16", 8 oz., and were worn at night only. The objective was to "burn anchorage" in the upper arch. (Fig. 26 & 27)

The final step in the treatment was to insure the patient had correct cuspid and anterior guidance. This was accomplished by wearing 1/8", 4 1/2 oz elastics from the upper cuspid pendulum to the lower cuspid and first bicuspid pendulums in a triangle configuration. These elastics were worn full time except for eating and hygiene and changed by the patient every twelve hours. (Fig. 28)

The maxillary second molars were then extracted. The upper arch wire was removed and ligature elastics placed around all of the empty brackets in the medium configuration for protection. The lower arch wire was left in place to act as a retainer. The occlusion was allowed to function for four weeks and re-evaluated.

Both the occlusion and the function of the Temporal Mandibular Joints were normal at the end of

Fig. 27

this four week period. The Delta Force appliance was totally removed and the patient placed in upper and lower Spring Hawley retainers. (Fig. 29 & 30)

The retention period was six months active retention (full-time wearing except for eating and hygiene), followed by six months passive retention (night time wearing only) sequencing out of the retainers one night per month. At the end of the twelve months the patient wore the retainers only once a week at night.

The patient was then monitored on a six month basis until all four third molars had erupted into occlusion. (Fig. 31)

Active treatment time from the initial placement of the upper ALF and Delta Force appliances to the beginning of retention was fourteen months.

The post retention records demonstrate the long term stability that was obtained by compensating the skeletal Class III. (Fig. 32 & 38)



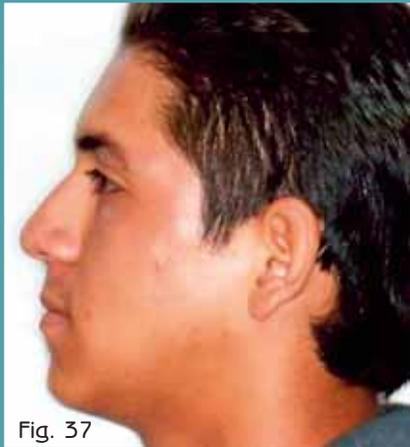


Fig. 37



Fig. 38

Conclusion:

The technique that has just been presented using a low friction Delta Force appliance in conjunction with an ALF appliance reduces the time of treatment, but also greatly increases the stability of the case. The key mechanical principles to

understand are the ability to reduce friction within the bracket, and being able to begin torquing the teeth at the very start of the therapy. This in turn creates a parallel relationship of the roots and reduces the forces required for sliding mechanics.

References:

- 1 Truitt, J.W. Cephalometrics for Today. FJO 1989, Vol.6(3): 5-11 & 47
- 2 Bastein, G.B., Truitt, J.W. The Bimler Cephalometric Analysis. 1985 Ortho Organizers, Inc., San Marcos, California
- 3 Truitt, J.W. Advanced Orthopedic and Orthodontic Therapy. 1987. Clinical Foundation of Orthopedics & Orthodontics. Gainesville, Texas.
- 4 James, G.A., Stroken, D., "The Significance of Cranial Factors in Diagnosis and Treatment with the Advanced Lightwire Appliance." Int. Journal of Orthodontics, 14: 3, pgs. 17-23, 2003.
- 5 Smith, G.H., Ashton, A., ALF Reduces Orthodontic Relapse Factor. The Functional Orthodontist, pages 16-20, Nov. /Dec. 1996.
- 6 Nordstrom, D., Positive Alveolar and Gingival Effects of the ALF Appliance. The Functional Orthodontist, pages 4-6, Nov. /Dec. 1996.
- 7 Wilson, H.E., The extraction of second molars as a therapeutic measure. Trans. Euro-Ortho Soc. 1966: 141-145.
- 8 Wilson, H.E., Long term observation on the extraction of second permanent molars. Trans Euro-Ortho Soc. 1974: 215-221.
- 9 Liddle., D.W., Second molar extraction in orthodontic treatment. Am Journal Orthod 1977: 72(6): 597-616.
- 10 Orton-Gibbs, S., Crow, V., & Orton, H.S., Eruption of third molars after the extraction of second permanent molars. Part 1: Assessment of third molar position and size. Am Journal Orthod 2001; 119(3): 226-238.
- 11 Witzig, J.T. & Spahl, T.J., The Clinical Management of Basic Maxilla Facial Orthopedic Appliances. Volume II. 1989 PSG Publishing Co., Inc., Littleton, Massachusetts.
- 12 Witzig, J.T. & Spahl, T.J. The Clinical Management of Basic Maxillofacial Orthopedic Appliances. Volume II. 1989 PSG Publishing Co., Inc., Littleton, Massachusetts.

Dr. J. Wellington (Skip) Truitt

Dr. Truitt received a Bachelor of Science degree from Texas Christian University and his Doctorate of Dental Surgery from Baylor University. He has maintained a private dental practice in Gainesville, Texas, since 1967. Dr. Truitt is also a consultant to other private medical and dental practices in Australia, Thailand, Singapore, South Africa, Mexico, Ireland, Norway, Germany, the United Kingdom, Canada and the United States. He is affiliated with the American & Texas Dental Associations, the American Association for Functional Orthodontics, the International Association for Orthodontics and the Australian Association of Functional Orthodontics. Co-author of four text books and published in numerous papers world wide on the subjects of Maxillofacial Orthopedics, Orthodontics and TMD Therapy, Dr. Truitt conducts a series of international seminars on these topics through the Clinical Foundation of Orthopedics & Orthodontics (www.cfoo.com), which are available on a DVD series. Dr. Truitt may be contacted at skipcfoo@suddenlink.net



Dr. Livier Carreon-Truitt

Dr. Carreon-Truitt graduated from the Universidad de Guadalajara, Mexico in 1985. Her practice has been limited exclusively to orthodontics since 2002 in Guadalajara, Mexico. She is currently in her second semester of a Specialist Orthodontics Masters Degree program at the Universidad de Guadalajara, Mexico.





1.800.547.2000
www.OrthoOrganizers.com