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Osamu Active Retainer for Correction of Mild Relapse

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Relapse of maxillary anterior rotations is common after orthodontic treatment (Fig. 1). The Osamu active retainer1 is a transparent removable appliance that can correct individual tooth positions during the retention phase.

The retainer consists of two superimposed layers. The inner layer, made of 1.5mm ethylene vinyl acetate copolymer (Bioplast), adapts to the interproximal areas and covers the palatal and lingual aspects of the teeth. The outer layer, made of .75mm hard elastic polycarbonate (Imprelon "S"), covers the occlusal aspects of the teeth and makes the retainer elastic and stable.

Retainer Fabrication

The fabrication procedure is as follows:

- 1. Set up any desired tooth corrections on the working cast (Fig. 2).
- 2. Draw a pencil line 4-5mm from the gingival margin, indicating the frenum attachment and the limit of the retainer material (Fig. 3).
- 3. Brush on the Bioplast separating medium. Heat the Bioplast for 50 seconds, then adapt it over the cast in a Biostar or Ministar with vacuum pressure (Fig. 4).
- 4. Cut the excess material from the bottom of the cast. Trim the occlusal and incisal edges, leaving 3mm of each tooth uncovered (Fig. 5).
- 5. Recheck the fit of the Bioplast on the cast. Rinse the Bioplast with lukewarm water, dry it, and replace it on the cast in the Biostar. Heat the Imprelon "S" material for 50 seconds, and coat the Bioplast layer with Osamu Bond adhesive during the last 15 seconds. Adapt the Imprelon "S" over the Bioplast on the cast, and leave it under pressure for at least five minutes (Fig. 6).
- 6. Trim the edges of the retainer as necessary with a cutting bur. Polish the edges (Fig. 7).

Conclusion

The Osamu active retainer is inexpensive and simple to make. It is well accepted by patients because it is transparent and does not impair speech (Fig. 8). It can correct individual tooth positions while maintaining close adaptation to the remaining teeth (Fig. 9). □

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FIGURES

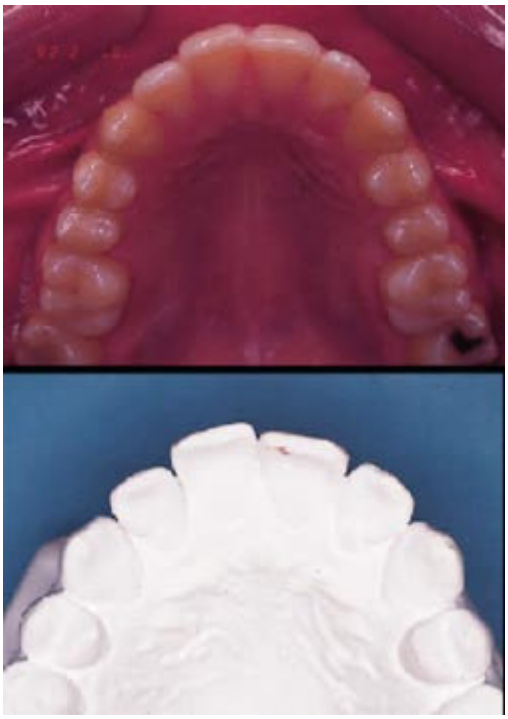

Fig. 1 Relapse of rotations in maxillary anterior segment.

Fig. 2 Tooth corrections set up on working cast.

Fig. 3 Pencil line 4-5mm from gingival margin indicates frenum attachment.

Fig. 4 Bioplast thermoformed over cast in Biostar after application of separating medium.

Fig. 5 Occlusal and incisal edges trimmed away, leaving 3mm of each tooth uncovered.

Fig. 6 Bioplast coated with Osamu Bond during last 15 seconds of heating Imprelon "S" material, prior to thermoforming of outer layer.

Fig. 7 Osamu retainer after final trimming and polishing.

Fig. 8 Transparent Osamu retainer in place.

Fig. 9 Case after active retention.

REFERENCES

1 Developed by Dr. Osamu Yoshii of Tokyo, Japan.

FOOTNOTES

1 Biostar: Great Lakes Orthodontics, Ltd., 199 Fire Tower Drive, Tonawanda, NY 14150.

2 Ministar: Great Lakes Orthodontics, Ltd., 199 Fire Tower Drive, Tonawanda, NY 14150.

3 Osamu Bond: Great Lakes Orthodontics, Ltd., 199 Fire Tower Drive, Tonawanda, NY 14150.

4 Imprelon "S": Great Lakes Orthodontics, Ltd., 199 Fire Tower Drive, Tonawanda, NY 14150.

5 Bioplast: Great Lakes Orthodontics, Ltd., 199 Fire Tower Drive, Tonawanda, NY 14150.