



Figure 17. The mandibular plunger after two advancements using 2 mm pieces of tubing sleeves.

Our clinical experience has lead us to the following cautions regarding the use of the acrylic splint Herbst appliance.

1. The appliance should be removable whenever possible. This reduces the risk of decalcification that may occur under a bonded appliance. The mandibular part of the appliance should never be bonded.
2. The appliance should be activated in a step-by-step fashion with the mandible reactivated no more than 2-3 mm at any one time. The Herbst appliance is advanced easily through the use of sleeves on the mandibular portion of the appliance.
3. The maxillary portion of the appliance may be bonded when auxiliaries are used. These auxiliaries include the use of rapid maxillary expansion and buccal tubes for the attachment of archwires.
4. As with any orthodontic appliance, excellent oral hygiene must be maintained by the patient.
5. Almost all patients who are treated with an acrylic splint Herbst appliance benefit from a final phase of comprehensive fixed appliance therapy. Also, many patients will benefit from a preliminary stage of partial fixed appliance therapy or removable appliance therapy to decompensate the dental arches.
6. This type of appliance may be very effective in treating certain types of Class II malocclusion, particularly those characterized by mandibular skeletal retrusion. It may be effective especially in Class II cases in which lower anterior facial height is either normal or excessive. However, the use of the acrylic splint Herbst appliance may be contraindicated in those patients who have a shorter-than-normal vertical facial dimension, because vertical facial development often is prevented by the acrylic splints.
7. The acrylic splint Herbst appliance is recommended for use primarily in the permanent dentition. Whereas occlusal corrections produced in the permanent dentition have proven to be reasonably stable, occlusal corrections produced in mixed dentition patients have shown relapse, especially in severe cases. In these patients, the FR-2 appliance of Fränkel (see Chapter 12) is the appliance of choice because of the orthopedic training effect of the FR-2 appliance on the soft tissue environment.