

CLINICAL AID

Fixed Space Maintainer for Use with a Rapid Palatal Expander

Removable space maintainers, usually made of acrylic plates with metallic clasps, are used in cases where multiple deciduous teeth have exfoliated in the same arch, or when there are no anchorage units available for fixed appliances. They can be modified during the eruption of the permanent teeth, but they are more expensive and more bulky than fixed appliances, and they also require patient cooperation.

Fixed space maintainers, if correctly fabricated, do not need to be readjusted during the development of the permanent dentition. They do need to be carefully controlled, however, and removed every six months to check for carious lesions. This article shows a fixed appliance that was used to maintain the space of a missing lateral incisor during rapid palatal expansion.

Appliance Design

A young female patient with a missing maxillary right lateral incisor needed resolution of a transverse and sagittal arch discrepancy. A fixed space maintainer was indicated because there was only one tooth to be replaced, the adjacent teeth were healthy, and the appliance had to be in position for a relatively long time. A resin pontic that

could be adjusted during palatal expansion was made to replace the missing incisor.

The resin tooth was connected to an .036" stainless steel "Z" spring (A). The palatal end of the spring was then laser-welded to the anterior arm of the rapid palatal expander (B).

The pontic immediately improved the esthetic appearance of the anterior teeth (C), and the space maintainer was well accepted by the child during rapid palatal expansion (D). The dimensions and position of the resin tooth were modified as necessary during treatment.

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