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Award Type	Research
Project Title	Treatment Effects Produced by Rapid Maxillary Expansion in the Mixed Dentition
Project Year	1997
Institution	University of Michigan
Summary/Abstract	<p>Brief Summary: This investigation evaluated the treatment effects produced by the acrylic splint expanded with or without prior dental decompensation with the removable Schwarz appliance.</p> <p>Summary: Early orthodontic and orthopedic intervention by way of a bonded acrylic splint expansion appliance was evaluated in patients beginning treatment in the early mixed dentition (approximately nine years of age). About fifty percent of the patients had brackets placed temporarily on the maxillary anterior teeth to achieve incisal alignment. About one quarter of the patients underwent an initial phase of dental decompensation by way of a removable lower Schwarz appliance. Phase II treatment with fixed appliances was completed when the patients were about 14 years old and follow-up records were obtained at about age 20.</p> <p>In those patients undergoing rapid maxillary expansion only, residual maxillary arch perimeter was 3.8 mm greater in the treated group than in untreated match controls. Similarly, residual mandibular arch perimeter was 2.6 mm greater in the RME group than in the controls, although no active expansion of the mandibular dental arch was attempted in Phase I. In those patients undergoing Schwarz/RME therapy followed later by Phase II treatment, this protocol resulted in a 4 mm increase in both mandibular and maxillary arch perimeter in comparison to control values.</p>