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Dental arch asymmetry in the mixed dentition

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ABSTRACT

Many orthodontists evaluate dental asymmetry clinically by comparing landmarks on the occlusal surfaces of dental casts. The purpose of this study was to quantify and describe maxillary and mandibular intra-arch asymmetry in 52 Caucasian children in the mixed dentition, and to determine if a relationship exists between intra-arch and interarch asymmetry. The median palatal plane (MPP) was used as a reference for transverse measurements. A computer-constructed transverse palatal plane (TPP) was the reference for anteroposterior measurements. Asymmetry greater than 2.0 mm was present at any one landmark in 25% of the sample. Transverse asymmetries exceeded anteroposterior asymmetries in magnitude and prevalence. The high association (Pearson's correlation) between the positions of anteroposterior and transverse interarch landmarks indicated that the arches had similar dimensions. Many children in the mixed dentition have intra-arch asymmetries that are more severe and prevalent in the transverse plane than in the anteroposterior plane.

KEY WORDS: Dental arch, Asymmetry, Children, Mixed dentition.

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