ABSTRACT
Background: Some studies and research showed increasing of palatal dimension in children during the growth period. Orthodontist choose to doing early orthodontic treatment at this period. The growth of palatal are different between early mixed dentition, late mixed dentition, and permanent dentition. Some orthodontist has argued that early orthodontic treatment give the best result when the palatal growth occurred. Objective: This research target is to determine the right time to begin early orthodontic treatment in children by measuring palatal height, palatal width, and palatal depth. Methods: This research was held at SDN Airlangga 2, Surabaya at September 2011. Total sample is 90 children, consist of 30 children with early mixed dentition, 30 children with late mixed dentition, and 30 children with early permanent dentition. The sample criterias are 8, 10, and 12 years old boys, never get any orthodontic treatment, and Javanese people in Surabaya. Palatal height, palatal width, and palatal depth were measured by sample dental cast. Result: The results show there are increase of palatal height, palatal width, and palatal depth as the growth of the age, but the differences are not significant. This research conclude that early orthodontic treatment can be held during the mixed dentition period.

Key words: palatal height, palatal width, palatal depth, mixed dentition, early treatment orthodontic