ABSTRACT

Background: The transition from the primary dentition begins at about age 6 with the eruption of the first permanent molars, followed soon thereafter by the permanent incisors. At age 10-12 the canines and premolars will erupt. The deciduous molars are considerably larger mesio-distally than their permanent successors, and although the deciduous canines are smaller than their successors, an overall surplus of space already exists in lateral segments, called leeway space. Purpose: The study was aimed to compare leeway space of male and female patients from Orthodontics Clinic at Dentistry Faculty of Airlangga University. Method: Fifty-six (28 males and 28 females aged 7-9 years) sets of dental casts with acceptable criteria were obtained from patients of Orthodontics Clinic at Dentistry Faculty of Airlangga University. The mesio-distal of canines and premolars’ crown diameters were measured with calipers to an accuracy of 0.05 mm. The mesio-distal of deciduous canines and molars was measured from mesial of deciduous canines to mesial of permanent molars. Kuswandari and Nishino method was constructed with linear regression equations for prediction of the mesio-distal widths of unerupted canines and premolars. Results: The mean of leeway space 0.80 mm (maxilla) and 1.84 mm (mandible) in males and 1.15 mm (maxilla) and 2.88 mm (mandible) in females. This study showed there was significant difference of leeway space ($p<0.05$) between male and female patients from Orthodontics Clinic at Dentistry Faculty of Airlangga University. Conclusion: There is influence of sex differences on variation of leeway space.

Key words: Leeway space, sex, mixed dentition, Kuswandari-Nishino method