

Comparison of arch form between ethnic Malays and Malaysian Aborigines in Peninsular Malaysia

Type: Article

Abstract:

Objective: To determine and compare the frequency distribution of various arch shapes in ethnic Malays and Malaysian Aborigines in Peninsular Malaysia and to investigate the morphological differences of arch form between these two ethnic groups. Methods: We examined 120 ethnic Malay study models (60 maxillary, 60 mandibular) and 129 Malaysian Aboriginal study models (66 maxillary, 63 mandibular). We marked 18 buccal tips and incisor line angles on each model, and digitized them using 2-dimensional coordinate system. Dental arches were classified as square, ovoid, or tapered by printing the scanned images and superimposing Orthoform arch templates on them. Results: The most common maxillary arch shape in both ethnic groups was ovoid, as was the most common mandibular arch shape among ethnic Malay females. The rarest arch shape was square. Chi-square tests, indicated that only the distribution of the mandibular arch shape was significantly different between groups ($p = 0.040$). However, when compared using independent t-tests, there was no difference in the mean value of arch width between groups. Arch shape distribution was not different between genders of either ethnic group, except for the mandibular arch of ethnic Malays. Conclusions: Ethnic Malays and Malaysian Aborigines have similar dental arch dimensions and shapes.

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