Analysis of the mandibular molar dental measurements of skeletal remains of prehistoric & recent human populations in Sri Lanka

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The objective of this study was to carry out a detailed comparative metrical analysis of mandibular molars in prehistoric hominids and present population. The dental measurements were taken in mandibular molars from skeletal remains found in prehistoric population (6,500 yrs B. P) and molars of recent modern population. Conventional osteometry was based on the method described by Brothwell. Two measurements, maximum mesiodistal diameter and buccolingual diameter were taken at right angle to each other. The dental indices such as crown base area and tooth size reduction per 1000 years were calculated. The mean crown base area reduction of 1st, 2nd and 3rd molars were 114.33mm^2 to 99.4mm^2, 106.13mm^2 to 87.47mm^2 & 107.77mm^2 to 87.71mm^2 respectively. The tooth reduction of 1st, 2nd and 3rd molars was 2.3mm^2, 2.9mm^2, 3.08mm^2 per 1000 years during the 6,500 years B.P to modern era. The reduction in molar measurement is less in Sri Lankans compared to the average of 5mm^2 every 1000 years reported in Europeans during Pleistocene. The reduction of tooth dimensions might be expected to change in populations over the period of time in response to selection pressure with reference to diet & food preparation techniques associated with the advent of agriculture, pottery, fire for food preparation etc through the hominid evolution in Sri Lanka.

Key words: Mandibular molars, Prehistoric hominids, Osteometry

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