Discriminant Function Analysis of Mastoid Measurements in Sex Determination

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ABSTRACT The purpose of this study was to develop a new standard for determination of sex of fragmentary human skeletal remains, using the mastoid process. It also attempts to assign rank to the commonly measured parameters of mastoid with regards to their sex discriminatory power. Logistic regression was also applied on mastoid variables to validate the results of discriminant functional analysis. The sample study (70 adult macerated skulls with known sex, 35 each male and female) was drawn from the Department of Anatomy and Forensic Medicine, Konaseema Institute of Medical sciences and Research Foundation, Amalapuram. Discriminant function analysis revealed that mastoid process correctly classified the sex in 90 percent of the subjects and mastoid length was found to be the best determinant for sex. A discriminant function equation specific for the present study skeletal population has also been derived from the variables.