

Determination of Sex Using Humeral Dimensions and Radiographic Measurements of the Humerus in Egyptian Population, Fayoum Governorate

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Abstract

Background: Sex determination of unidentified skeletal stays from crime scenes or uncovering destinations is a significant part in the improvement of the natural profile in criminology and human science.

Aim of work: The purpose of this research was to determine if sexing of obscure grown-up human humerus bones can be done by applying estimations of morphometric parameters produced by present investigation on these bones of grown up humans of known sex. Also, it aimed to discover the best parameters for sex determination.

Method: This study was conducted on 52 humeri of 28 males and 24 females and 98 radiographs of patients (48 males and 50 females) from the population of Fayoum governorate in Egypt. Humeri bones used in this study were collected from the Anatomy Department, Faculty of Medicine, Fayoum University.

Results: The study illustrated that no statistically significant differences with p-value >0.05 were found between bone and X-ray findings as regards age and sex distribution. Also, no statistically significant differences with p-value >0.05 were reported between both findings regarding other measures including TDMS, UEB, VDH, and ad ML measures. On the other hand, statistically significant differences with p-value <0.05 were reported between different genders regarding EP, TDMS, UEB, VDH, ML, and CT with higher mean values noticed among males.

Conclusion: It is presumed that the distal humerus is a viable bone for sex estimation, even if the bone is in fragmentary state