A Morphometric Study of the distal humeri in a Sri Lankan population

Niluka D.H.M[1] , Madushika P.K.K[1], L.A Indunil[1], Deegodagamage Y.S[1], Wijesundara W.M.C.S[1] Dissanayake MHP[1], Dissanayake S[1], S. Shiyanth[1], Edirisinghe EAST[1], Yasawardene SG[1] , Dissanayake PH[1]

Department of Anatomy, Faculty of Medical Sciences (FMS), University of Sri Jayewardenepura(USJP)[1]

Introduction

The distal segment of the humerus articulates with the bones of the forearm and fractures involving it may lead to several reconstructive problems and complications. Fractures of the distal segments of the humerus involving olecranon can occur as a result of hyperextension trauma to the elbow joint.

Objective

To study the osteometric measurements of distal humeri in Sri Lankan population.

Methods

Forty-eight(left28:right20) humeri, at Department of Anatomy, University of Sri Jayawardenepura were analyzed. Measurements were taken by a digital Verenier calliper in millimetres up to 2 decimal points by two independent individuals and mean value was taken.

Results

The mean of the distance between most distal and most proximal points along the edge of the olecranon fossa(AB) was 18.70 ±2.35mm while right sided common mean of18.83±2.14mm and left sided common mean of 18.60±2.52mm. Majority of AB distance was in 19.00-20.99mm category(14/48).

The common mean of the distance between the most distal point of trochlea and the most distal end of the olecranon fossa(CD) was 16.44±1.95mm with a right sided meanCD distance of 15.82±1.75mm and a left sided mean of 16.89±2.00mm. Majority of CD distance was between 15.00- 16.99mm category(17/48). The CD distance was ranging from 11.1-20.6mm

Conclusions

The details are important in forensic and archeological fields to identify unknown bodies as well as for the orthopedic surgeons for the reconstruction of distal humerus fractures.