Biometric characteristics of the metacarpal bones in Chilean individuals [Características biométricas de los huesos metacarpianos en individuos Chilenos]

Soto A.

Olave E.

Binvignat O.

The metacarpal bones are long and cylindrical and articulate proximally and distally with carpus and with the proximal phalanges of the fingers, respectively. These bones have received special attention in the area of??forensic medicine for sex determination. In order to provide biometric data on the metacarpal bones in Chilean individuals group, we determined radiographically in 52 hands, of both sexes, the length of each, the width of the base, body and head. In male subjects, the length averages were in the first metacarpal bone 40.9 ± 6.4 mm and in the second metacarpal bone 60.8 ± 7.4 mm, in females the first metacarpal bone had an average of 39.2 ± 5.2 mm and second metacarpal 60.6 ± 8.9 mm. The width averages of the proximal epiphysis of metacarpal bones in male individuals were in first metacarpal 12.5 ± 2.1 mm and in second metacarpal 14.8 ± 2.1 mm; in females, in the first metacarpal was 11.6 ± 2.3 mm and 13.9 ± 2.1 mm in second metacarpal bone. The diameter averages in the middle of the body in male individuals were 11.8 ± 2.2 mm in first metacarpal bone and in second metacarpal, 11.7 ± 2.2 mm; in females, the first metacarpal had 10.86 ± 2.8 mm and the second metacarpal bone, 11.8 ± 2.6 mm. The width averages of the distal epiphysis in male individuals were 6.7 ± 1.2 mm in first metacarpal bone and in second metacarpal, 5.7 ± 1.2 mm; in females, this variable was 6.2 ± 1.5 mm in the first metacarpal bone and in the second metacarpal bone was 5.0 ± 1.4 mm. The first metacarpal bone was the shortest of metacarpals. The second metacarpal always had a greater length than the other metacarpals, especially the third, next in length. In one case only the second metacarpal length was less than the third and in two cases the second and third metacarpal had the same length. The third metacarpal was always longest than the fourth. These results are a contribution to the knowledge of the

metacarpal bones of our population and can be used both in forensic and in the trauma areas.

Anatomy

Hand

Metacarpal bones