Abstract

The aim of this work is sexual dimorphism quantification of greater sciatic notch profile using 2D geometric morphometrics methods. The curvature was digitized by two different methods – manually with contact digitizer MicroScribe® G2 and automatically with software Morphome3cs. Results from each method were comparised and advatages and disadvantages of boths methods were discussed.

Target sample of 114 adult specimens of known sex was analyzed. This collection comes from Maxwell Museum of Anthropology, The University of New Mexico, Albuquerque and contains 57 male and 57 female hip bones. For the method verification the test smaple contains 112 adult specimens of known sex was used. This collection comes from Universidad Nacional Autonóma de México (UNAM). This collection contains 56 male and 56 female hip bones.

The procrustes analysis, principal components analysis, thin plate spine and discriminant function analysis were used for analysis. We could make a detail description of morphologic differences in greater sciatic notch shape of men and women because of shape visualisation and difference of both group was confirmed by discriminant function analysis. Sex assesment achieves accuracy 92,11% - 98,25% in dependence on used methods and number of semilandmarks.