Abstract

Determination sex is one of the most important tasks in the identification of skeletal remains. Previous studies have shown that population differences in size and shape of femora can affect correct sex allocation. This thesis tested the discriminat functions generated from different populations and confirmed population specificity of the femur discriminant functions. Two samples of the identified adult femora for this project was used. First sample originates from the Czech population living in the 1st 20th century (78 males and 81 females) and second sample originates from the Czech population living in the 2nd 20th century (67 males and 35 females). Both samples also help us estimate the influence of secular trend of the femur´variables to the correct sex classification by discriminat functions calculated in the Czech population. The results showed the existence of the secular trend in femora size dimensions. Only the dimensions of the femoral head (vertical head diameter-F18, transverse head diameter-F19 and maximum diameter of the femoral head-MPH) and sagittal subtrochanteric diameter (F10) not chandged significantly during the 20th century. The secular trend has negatively influenced the correct sex classification, always for one subpopulation. Only the dimensions in which the secular trend was not confirmed, achieved similar result of the correct sex clasification. Correct classification by femoral dimensions reaches 71.4 to 93.9% and due to the secular trend of decline by up to 20%. Those results led us to conclude that the discriminat functions derived from the femora in the Czech population living in the first 20th century, can not be applied to the contemporary Czech population.