Summary

Title of the thesis: 2-D photographic analysis for evaluation of women posture in late stages of pregnancy

Aims: Based on literature search to characterize biomechanical changes in up-right posture of pregnant women. To propose a process of evaluation and segmentation of side-view photographic pictures of pregnant women. To evaluate prevalence and intensity of back pain among the group of selected pregnant women.

Methods: The 2-D analysis of photographic pictures was used as the main method in the AutoCad® software, by which the body segmentation was carried out. Position of the center of gravity projection to the ground plane was found by the Kistler® device (Multicomponent force plate with glass top plate). Evaluation of back pain was realized by a questionnaire search.

Results: Our analysis showed that the center of gravity projection to the ground plane does not change during pregnancy. The mechanism by which pregnant women balance the increased mass in the bottom part of the trunk consists in a backward shift of the upper trunk segment and in increased buttocks mass. The prevalence of back pain found among the group of selected pregnant women was 92,3%.

Key words: Back Pain; Center of Gravity; Posture; Pregnancy