

Bibliographic identification

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Abstract

The purpose of this master thesis was to find out, if there are objective changes in biomechanics of the gait and upstairs gait by objectives with diagnosed femoroacetabular impingement syndrome and by healthy objectives. The data were acquired using kinematic analysis Qualisys and processed using software Qualisys track manager and Visual3D. The subject of research was the range of motion in hip joint in frontal and sagittal plane, than the movement of pelvis in frontal plane, movement of pelvis against thorax in transversal plane and deviation of the axis of spine in frontal plane. These parameters were documented using angular deviation of the segments, deviation of the segments in the plane or shifting of the markers in coordinate system. The conclusions were than statistically evaluated. There were 20 objects with diagnosed femoroacetabular impingement syndrome in the age from 23 to 47 years of age included in the study. In the gait research, a significant difference in angular deviation of the pelvis against thorax in transversal plane (°) was measured. Other parameters were showing only statistically insignificant deviations. There wasn't proofed any significant difference between both groups during upstairs gait in any of the measured parameters. In this study we have found one parameter, which was significantly differed in both observed groups.

Keywords

Femoroacetabular impingement syndrome, kinematics analysis, gait, hip joint