

Abstract

Title: Impact evaluation of a anterior cruciate ligament rupture on postural stabilization by a method postural somatoscillography before and after the reconstruction surgery

Objective: Compare measured postural stability values by postural somatoscillography which will be carried out before planned ACL reconstruction surgery rupture, early after the surgery and in a longer time period after rehabilitation.

Methods: This thesis has been created as a pilot study using a descriptive and associative form. Research part focuses on measurements done on the Posturomed surface during postural provocation test. Platform movement has been recorded by accelerometer and transferred into Microswing diagnostic system and evaluated using the Postural somatoscillography Posturomed Commander application.

Results: After reconstruction surgery is the ability of postural stabilization better than before surgery. Postural stabilization has been improving within the group of probands during all measurements. However, the ability of long-term stabilization is at very low level in comparison to healthy subjects. Postural stabilization of uninjured limb is better than stabilization of injured limb in all research stages.

Key words: anterior cruciate ligament, injury, postural stabilization, Posturomed