

Abstract

Name: Influence of a rupture and reconstruction of an anterior cruciate ligament on the postural activity of an individual

Aim: The aim of my thesis is to find out whether a rupture and the following rupture reconstruction of an anterior cruciate ligament has an influence on the postural activity of an individual namely after a longer period (at least one year) from the undergone operation.

Methods: The thesis has been worked out by a form of an analytical comparative study where it deals with measuring of two groups of probands – healthy and those after anterior cruciate ligament operation. The postural behaviour of individuals was tested after deflection by impact of a pendulum at a free standing position with and without visual control and also when standing on one leg.

Results: The results of the measuring denote that when a person after anterior cruciate ligament rupture and following rupture reconstruction is deflected by an external impact while standing on both legs he/she will rather rely on the leg without surgery but the side difference will not be very distinctive. This fact will not change much even without visual control. While standing on one leg though the individual after surgery will have a more serious problem to stabilize his/her position (the period of time to stabilize will be longer) than the healthy individual. This fact will become evident even on the leg without surgery. But the amplitude of anteroposterior coordinate of the centre of pressure will not be distinctively different from the amplitude of the healthy people.

Key words: knee-joint – LCA reconstruction – postural stabilization – stabilometry