

Relationship Between Functional Knee Joint Position Sense and Functional Performance Scores Following Anterior Cruciate Ligament Reconstruction (Pilot Study)

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Objectives: The aim of this study was to assess the relationship between functional knee joint position sense (JPS) and functional performance following ACL reconstruction

Methods: Seven male patients (mean age=32,66 ±6,47) who had undergone ACL reconstruction and 10 male healthy control subjects participated in the study. Knee joint position sense was evaluated by reproduction of 20° knee flexion angle in weight-bearing position with single and bilateral limb movement into flexion and extension. The deviations in the angle were recorded and compared to both noninjured side and healthy controls'. Functional performance was evaluated with Single Leg Hop Test in both injured and non-injured sides. The scores were also compared with healthy controls and non-injured sides. Relationship between measured values was tested with Spearman Correlation Analysis.

Results: There was no significant difference in knee joint position sense in functional position between the operated and uninjured knees of patients or between patients and healthy controls ($p>0,05$). However, there is significant difference in Single Leg Hop test scores between operated and non-operated or between patients and healthy controls ($p=0,037$; $p<0,05$). There was no significant correlation between Single Leg Hop test scores and knee joint position sense ($p>0,05$).

Conclusion: There was no evidence of impaired joint position sense in weight-bearing positions in subjects with ACL reconstruction but there was a decrease in functional performance. This decrease in functional performance may depend on the other parameters except proprioceptive deficits.

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