

# Do the Patients Really Need Concentrated and/or Accelerated Rehabilitation Program After ACL Surgery? A New Lightened Rehabilitation Program: A Prospective - Double Blind - Randomized- Controlled Study

Defne Kaya<sup>1</sup>, Egemen Turhan<sup>2</sup>, Gürhan Dönmez<sup>3</sup>, Mahmut Nedim Doral<sup>2</sup>

<sup>1</sup>Department of Physical Therapy and Rehabilitation, Faculty of Health Science, Biruni University, Istanbul, Turkey; <sup>2</sup>Department of Orthopaedics and Traumatology, Faculty of Medicine, Hacettepe University, Ankara, Turkey; <sup>3</sup>Department of Sports Medicine, Faculty of Medicine, Hacettepe University, Ankara, Turkey

**Objectives:** The purpose of this study was to design and assess the outcomes of the new lightened rehabilitation program after anterior cruciate ligament reconstruction (ACL-R).

**Methods:** Thirty-two of the 57 patients with ACL-R using tibialis anterior grafts completed the study. The patients in the lightened rehabilitation program were compared with patients in standard rehabilitation program. The two groups were assessed using International Knee Documentation Committee (IKDC) and Lysholm scores, isokinetic knee muscle strength, knee joint position sense, and hop test.

**Results:** There were no significant differences in muscle strength of the quadriceps and hamstring at 60°/s, 180°/s, and 330°/s between the operative and non-operative side in the lightened rehabilitation group while there was significant difference in muscle strength of the quadriceps and hamstring at 60°/s between the operative and non-operative side in the standard rehabilitation group. There were significant differences in muscle strength of the quadriceps and hamstring at 330°/s and joint position sense at 75°, 45°, and 15° between the operative side of the patients in lightened rehabilitation group and operative side of the patients in standard rehabilitation group. There was no difference in the knee joint position sense at 15°, 45°, and 75°, between the operative and non-operative side in the both groups.

**Conclusion:** Clinical relevance of this study is that the new lightened rehabilitation program should be also succeeding as much as standard rehabilitation program after ACL-R. It is suggested that future studies might evaluate the effects of the new lightened rehabilitation program for different grafts and professional athletes.

---

The Orthopaedic Journal of Sports Medicine, 2(11)(suppl 3)

DOI: 10.1177/2325967114S00274

©The Author(s) 2014