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A comparison of knee brace versus active exercise for range of knee bending in patients with anterior cruciate ligament reconstruction: A systematic review

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Aim: Anterior cruciate ligament (ACL) injury is one of the most common sports injuries. Nowadays, countries all over the world strive to prevent and reduce ACL injuries. Knee brace and active exercise were most common from professional suggestions, however recent studies results have shown brace might not an effective strategy. The purpose of this study was to investigate the comparison of knee brace versus active exercise for range of knee bending in patients with anterior cruciate ligament reconstruction using systematic review.

Methods: Four electronic databases (PEDro, PubMed, Cochrane and CINAHL) were searched to identify experimental studies of adult populations. Keywords were ACL, rehabilitation, and reconstruction. The articles in databases published before the end of 2015 were searched. The excluded criteria were other special purposes for the design of the protective gear in the trials, or if the treatment included plaster fixation, bandage fixation or joint movement limitations. The quality of studies was evaluated using CASP appraisal tool.

Results: Total of 15 RCTs met the inclusion criteria and only 2 RCTs (Level 2) was included in this study finally. The results of the literature analysis showed that the patients who received early ACL reconstruction rehabilitation had better knee flexion angle for non-brace support group than brace support group after three months for operation. Patients had stronger muscle power for non-brace- supportive group than brace-supportive group after 4 and 12 months follow.

Conclusions: There was no evidence to support the benefit of brace support after surgery.

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