ABSTRACT

Background: Surgical outcomes following isolated posterior cruciate ligament reconstruction (PCLR) have been noted to be less satisfactory than the anterior cruciate ligament. Limited understanding of optimal rehabilitation has been implicated as a contributing factor.

Hypothesis/Purpose: The purpose of this review was to gather the literature related to isolated PCLR rehabilitation, extract and summarize current rehabilitation guidelines, identify timeframes and functional measurements associated with common rehabilitation topics and provide recommendations for future research.

Study Design: Literature review.

Methods: A literature review was performed for scientific publications that include a detailed rehabilitation program following isolated PCLR, published between January 2005 and March 2018. Data related to weight-bearing, knee range of motion (ROM), brace usage, specific exercise recommendations and suggestions for return to running and sport activities were extracted and categorized.

Results: A total of 44 articles met inclusion criteria. Post-operative weight-bearing was discussed in 35 articles with recommendations ranging from no restriction to 12 weeks of limitations. Forty-two articles recommended the use of immediate post-operative bracing, the majority of which positioned the knee in full extension, with duration of use ranging from one to 12 weeks post-operatively. Although 30 articles offered detailed descriptions of ROM activity, there was significant variability in timing of initiation, angular excursion and progression of range of motion. Suggested timeframes for returning to sports activity ranged from four to 12 months, with only four articles providing specific objective strength or functional performance criteria necessary for progression.

Conclusions: There is substantial variation in nearly all aspects of published descriptors of rehabilitation following isolated PCLR. Most protocols are based upon biomechanical principles and clinical expertise, relying solely on time-frame from surgery to support rehabilitation decision making. Evidence to compare patient outcomes with specific loading, ROM progression and exercise strategies is currently lacking. Only a small number of protocols incorporate the use of specific objective performance goals to facilitate return to sport decision making.

Key words: PCL reconstruction, physical therapy, posterior cruciate ligament, rehabilitation