

An analysis of the incidence, risk factors, and timing of development of cyclops lesions after anterior cruciate ligament reconstruction

Abstract

Background: Cyclops lesions are a known complication following anterior cruciate ligament reconstruction (ACLR) with a described incidence between 1.9% to 10.9%. The objective of this study was to identify the incidence, timing, and variables that correlated with development of a cyclops lesion, and if objective functional testing differed between patients with and without cyclops lesions.

Methods: 313 consecutive patients who underwent ACLR and participated in Lower-Extremity Assessment Protocol (LEAP) testing at a single, academic institution were analyzed. Retrospective chart review was performed to identify patient demographic factors, medical comorbidities, and potential peri-operative risk factors. Postoperative functional outcome metrics and patient reported outcomes were collected per the institution's LEAP testing protocol. Binary logistic regression was utilized to identify risk factors for cyclops lesions. Objective functional outcomes and patient reported outcomes were compared between patients with and without cyclops lesions.

Results: 23/313 (7.35%) patients developed a cyclops lesion following ACLR, of which 17 (73.91%) were found to be symptomatic. Concomitant meniscal repair correlated with an increased likelihood of developing a cyclops lesion ($p = 0.040$); no other risk factors significantly differed between cohorts. There were no clinically relevant extension deficits or differences in objective functional performance measures at six months post-operatively between study cohorts.

Conclusions: Concomitant meniscal repair may be associated with the development of cyclops lesions due to restrictive postoperative range of motion protocols; however no other pre- or intra-operative factors demonstrated significant correlation. Presence of a cyclops lesion should be considered with late loss of knee extension after ACLR.