

21

QUESTION

HOW DO YOU MANAGE THE ACL PATIENT FOLLOWING RECONSTRUCTION?

John-Paul H. Rue, MD, LCDR, MC, USN, and Brian J. Cole, MD, MBA

Early rehabilitation protocols following anterior cruciate ligament (ACL) reconstruction often involved immobilization of the extremity for more than 6 weeks. This was thought to allow time for the graft to heal and the inflammatory phase to pass.¹ Unfortunately, this immobilization had adverse effects on articular cartilage, ligaments, and other structures about the knee. In order to overcome many of the common complications present during the early evolution of ACL reconstruction, Shelbourne and Nitz described an accelerated rehabilitation program with emphasis on early return of full extension and full weight bearing as tolerated.² This accelerated protocol has been controversial, however, due to concerns that it may place increased forces on the ACL graft, leading to increased anterior laxity. This does not appear to be the case, as Beynnon et al demonstrated no significant difference in anterior laxity in a prospective, randomized double-blind study between groups treated with an accelerated or nonaccelerated ACL reconstruction protocol.³ Our ACL rehabilitation protocol is based on the previously mentioned accelerated model because of the decreased likelihood of arthrofibrosis and other complications and improved strength and range of motion. In general, the accelerated ACL rehabilitation protocol described below encompasses many of the lessons learned from earlier, less aggressive protocols.⁴

Our primary rehabilitation goals following ACL reconstruction are progressive weight bearing, restoration of motion with emphasis on full extension, quadriceps strengthening, control of inflammation, and restoration of normal gait. In order to accomplish these goals, we often divide the rehabilitation program into phases,⁵ with each phase getting progressively more complex (Figure 21-1).

Phase 1 is from 0 to 4 weeks postoperative. During this time, patients are weight bearing as tolerated with crutches. They are placed in a range-of-motion brace locked in full extension for ambulation and sleeping for the first week. From weeks 1 to 4, the brace

