Overview: ACL injuries are common knee injuries in both the athletic population and workplace. Even after a successful ACL reconstruction, it is possible to reinjure the ACL. That being said, success rates for ACL reconstruction approach 95-98%, but are often dictated by the associated injuries sustained at the time of injury. ACL revision surgery may be needed in patients if re-injury has occurred. The most common causes for graft failure include: a misplaced ACL graft tunnel, failure at the graft fixation points, graft impingement, or repeat trauma/injury.

Anatomy: The Anterior Cruciate Ligament or ACL is one of four major ligaments of the knee, which connect the femur to the tibia. The ACL helps to stabilize the knee joint by preventing the tibia from shifting forward while also providing rotational stability. ACL injuries can happen in conjunction with meniscus, cartilage, or other ligament damage.

Clinical Evaluation: Diagnosis of a secondary ACL injury is often made clinically. However, X-rays and magnetic imaging studies (MRI) can also be helpful in confirming the diagnosis as well as identify other injuries or secondary instabilities.

Initial Management: Once an injury is sustained treatment is focused on obtaining a full range of motion of the knee and allowing the swelling to subside. This can often occur within the first week to ten days but can take as long as 6 weeks in the cases of associated injuries. Once this occurs both conservative and operative treatment options can be exercised.

Non-Operative Treatment: Conservative treatment involves muscular strengthening and often bracing to help stabilize the knee. This option is optimal for patients who are older, less active, and not planning on returning to cutting sports. It is an effective form of treatment for those not experiencing instability from normal activities. In patients where stability is not obtained after a thorough rehabilitation program, surgical reconstruction offers a better alternative in preventing recurrent instability and return to function.

Operative Treatment: Surgical management of these injuries involves reconstruction of the re-torn ACL. This is typically performed after knee motion has returned and swelling has dissipated. Reconstruction is performed arthroscopically using one of three graft options that the body then utilizes to incorporate over time into a functioning ACL. These graft options include: patella tendon autograft, hamstring autograft, or cadaver tissue allograft. Graft choice depends largely on previous surgical treatment and will be discussed with the surgeon prior to surgical reconstruction. Revision ACL surgery involves removing the previously grafted ACL along with any other hardware in the knee and replacing it with a new graft. Often the position of the previous graft may need to be altered and the possibility of this will be discussed with the surgeon prior to surgery. The goal of this procedure is for the patient to successfully return to full athletic activity without a brace at 6 – 12 months, but rehabilitation may be lengthier and less aggressive depending on the nature of re-injury. A general guideline of ACL rehabilitation can be found within the Rehabilitation Protocols.

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