

Management of Anterior Cruciate Ligament Tear

Introduction

The knee joint is the largest joint in our body and which is responsible for walking, running and pivoting in various sports activities. There were four major ligaments which contribute to the joint stability which included the two cruciate ligaments and the two collateral ligaments. In our consultation, anterior cruciate ligament injury is one of the most common causes of sports related injuries.

Symptoms

Athlete who twists his knee may lead anterior cruciate ligament tear. The patient usually can recall a “POP” sound and sense the “giving way” of the knee joint. There will be progressive swelling, pain of the knee. The athlete usually cannot complete the game and he may find difficulty in walking. For those patient with chronic ACL insufficiency, they usually complained of knee instability during pivoting movement and experienced “giving way” of the knee.

Diagnosis

During the consultation, he will be noted to have joint effusion and abnormal joint motion during the specially designed stress test such as anterior drawer test and Lachman test. There may be co-existing injuries such as meniscus tear, bone contusion, etc. X-ray may be taken to look for any associated fractures or bony lesion. MRI examination can provide further information on the status of various soft tissue structures within the knee such as the two cruciate ligaments, the two collateral ligaments, meniscus and cartilage which can help us for diagnosis and preoperative planning.

Treatment

After the acute injury of the knee, patient will be suggested to have the “RICE” therapy by “Resting” the injured limb, application of “Ice” to the injured part, utilization of “Compression” bandaging and “Elevation” of the injured limb. This can help to control the swelling, prevent further injury and speed up the recovery. If the ACL injured patient had symptoms of instability especially for those young athletes, an Arthroscopic assisted ACL reconstructive surgery is recommended. This reconstructive surgery usually utilizes a tendon graft to mimic the function of the original ACL by fixing tendon graft according to the course of the original ACL. The patient usually requires a course of physiotherapy (range form 6 months to 9 months) for improving the range of motion, walking ability, muscle strength and proprioception after the surgery. The patient was expected to resume sport after regaining sufficient range of motion, strength and proprioception.