



Fibular Head Avulsion Fracture - A Rare Entity: Surgical Management of a Case

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INTRODUCTION

Fibular head avulsion fractures are rare injuries determined by traction of the fibular attachment of the lateral collateral ligament (LCL). This fracture can be isolated or associated with ruptures of the stabilizing structures of the posterolateral corner of the knee or of the anterior or posterior cruciate ligaments (ACL/PCL). In some cases, the peroneal nerve can also be damaged by these kinds of trauma. It generally occurs following sports injuries or traffic accidents from excessive varus stress of the knee. Surgical treatment is often recommended with different techniques such as tension band fixation or lag screw stabilization.

OBJECTIVES

The use of suture anchors may be an effective technique of fixation in avulsion fracture of the fibular head associated with combined posterolateral corner injuries.

Current literature is poor about this valuable surgical alternative to the classic techniques used to reconstruct LCL.

METHODS

A 26-year-old patient came to our Emergency Service (ES) after a car accident. On physical examination, a left knee tumefaction was evident along with functional impotence of the knee. The knee appeared unstable with a highly positive varus stress test (+++) and also an apparent antero-posterior instability. No peripheral nerve deficiencies were detectable. With this clinical presentation and X-ray, we suspected a complex injury of the posterolateral corner with an avulsion fracture of the left fibular head. An MRI was done, which confirmed our suspected diagnosis: the patient had an avulsion fracture of the fibular head with LCL rupture and partial rupture of the PCL.

10 days after the accident, the patient was submitted to surgery. The fibular head was reduced and fixed using one suture anchor inserted through the fracture line into bone to have a tensioning of the lateral ligaments complex (conjoined tendon).



RESULTS

Postoperative radiographs showed satisfactory reduction. The patient was placed in an above-knee posterior plaster slab in 10 degree flexion for 3 days followed by in knee immobilizer for 2 weeks, allowing partial weight bearing. After 2 weeks, gentle knee ROM exercises were started. 90 knee flexion was allowed after 6 weeks followed by full ROM by 8 weeks. Full weight bearing after by 12 weeks. At 5 months the patient conserved full ROM. The knee appeared stable and she is able to walk without crutches. She resumed normal life without restriction. For now, there was no need to approach the PCL, and there is no clinically evident anteroposterior instability.



CONCLUSIONS

A fibular head avulsion fracture is a rare entity. These injuries can be managed with multiple treatment options from conservative to fixation of avulsed fragment by various surgical methods, depending on severity and combined injury. In our patient, this technique provided anatomic fixation and a good grade of retention of LCL that allowed the patient to obtain early mobilization and knee stability in a short time.

