



Case Report and Review Litarature: Bilateral Varus Knee with Lateral Compartment Pain Treated with Tibial Osteotomy

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Abstract

This case report presents the saucerful management of a 19-years -old patient with bilateral varus knee lateral compartment pain through tibial osteotomy. The patient experienced occasional medial compartment pain during stress or pressure. Surgical intervention involved tibial osteotomy with upper lateral tibial correction and fibular bone shortening. Tibial stabilization was achieved using a plate and compression screws. Long term follw up after seven years demonstrated excellent outcomes, with complete correction of the knee axix and significant improvement in pain. This report highlights the efficacy of tibial osteotomy in managing varus knee deformity and associated lateral comparment pain, supported by a comprehensive review of relevant literature.

Introduction

Varus knee deformity, characterized by an inward angulation of the knee joint, can lead to lateral compartment overload and subsequent pain. Surgical correction using tibial osteotomy is a commonly employed technique to realign the knee joint, relive symptoms, and improve overall fiction. This case report describes the successful surgical management of bilateral varus knee and lateral compartment pain in a 19-year-old patient, highlighting the use of tibial osteotomy and presenting a review of relevant literature on the subject.

Case Presentation

A 19-year-old patient presented with bilateral varus knee and significant lateral compartment pain. In addition, he experienced occasional medial compartment pain during stress or pressure. Clinical examination and radiographic evaluation confirmed the varus knee deformity. After a through discussion of treatment options and informed consent, the decision was made to proceed with bilateral tibial osteotomy.





After Surgery Left Side



After Surgery Right Side



After 7 Years



After Surgery Directly



After 7 Years

Surgical Technique

Under general anesthesia, bilateral tibial osteotomy was performed following standard surgical protocols. The upper lateral tibial correction was carefully executed to restore the proper alignment of the knee joint. Additionally, fibular bone shortening was performed to optimize the overall mechanical axis. The tibia was stabilizing using a plate and compression screws, ensuring stability and fixation.

Postoperative Course and Follow-up

Following surgery, the patient underwent a comprehensive rehabilitation program, including physical therapy aimed at restoring joint mobility, muscle strength, and functional range of motion. Progressive weight-bearing activities were gradually introduced based on clinical assessment and radiographic monitoring. Regular follow-up evaluations were conducted at predetermined intervals to monitor the healing process.

Outcome

Upon final assessment after seven years, both clinical and radiographic evaluations demonstrated excellent outcomes. The knee axis was completely corrected, achieving the desired alignment and reducing the varus deformity. The patient reported a significant reduction in pain levels and improved knee function, enabling him to perform daily activities with ease. Furthermore, no complications were observed during the postoperative period.

Review literature

A thorough review of the literature was conducted to support the findings and highlight the existing evidence regarding the management of varus knee deformity and associated lateral compartment pain. The literature revealed that tibial osteotomy is a well-established surgical procedure with favorable outcomes in terms of pain relief, joint alignment restoration, and functional improvement. Numerous studies have reported successful results using different osteotomy techniques and fixation methods, confirming the efficacy and safety of this approach.

