Anterior Cruciate Ligament Rupture in Gouty Arthritis
A Case Report

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Introduction

Gout is a disorder of purine metabolism characterized by hypuricaemia, deposition of monosodium urate monohydrate crystals in joints and peri-articular tissues and recurrent attacks of acute synovitis. Gout is the most common inflammatory arthropathy reported to varies from 1 to over 10 per 1000. Chronic tophaceous gout can develop after years of acute intermittent gout. In 10 per cent of patients with gout, tophi form, these may destroy skin, tendons, ligaments, and the skeletal structures. Although tophaceous gout without arthritis might be more common than previously recognized and intra-articular gouty deposits in the knee are common, tophaceous gout infiltration of the anterior cruciate ligament (ACL) is extremely rare.

Case Report

A 39-years-old male presented with intermittent pain of the right knee since 8 years ago. The symptom then accompanied with instability that gradually affected his daily living especially when walking or doing sports. These complaints initially triggered by neglected sport injury. From the clinical exam revealed no sign of effusion, no acute inflammation sign e.g. redness, swelling, deformity, localized joint tenderness around knee and the range of motion slightly limited with the extension of -5 to flexion of 110. Special test with Lachmann test showed a grade 2 positive and grade 2 positive pivot shift maneuver with no concurrent meniscal problem. From the laboratory examination revealed a high level of uric acid (8.5 mg/dL). A radiograph of knee showed no abnormalities but a non contrast MRI scans showed bursitis of the supra and retropatellar bursa, partial thickness tear of anterior cornu of the right lateral meniscus, and total tear of the anterior cruciate ligament. An arthroscopy was performed and revealed calcific material scattered in almost all compartments of knee join. The ACL was covered with that material and torn at the femoral attachment site, the other ligament was intact but also covered by these material. Arthroscopy and transtibial ACL reconstruction was then performed using Hamstrings graft with semitendinosus three-bundle technique, endobutton and fixation with pioscrew. Specimen that are taken were done for analysis. The results revealed an identically histology of tophaceous gouty arthritis.
Discussion

We encountered a rare case of ACL rupture accompanied by intra-ligament tophaceous gout infiltration. Treatment for this condition involved an extensive synovectomy for debridement of intra-articular tophi and an ACL reconstruction using autohamstring tendons. If hyperuricemia persists for a long time, tophaceous deposits may be found in the subcutaneous tissues and the various joints, particularly the first metatarsophalangeal joint, the hand, wrist, or elbow, finger pads, sacroiliac joint, carpal tunnel, ankle, shoulder, dorsum of the feet, knee, acromioclavicular joint, and axial skeleton. Chronic tophaceous gout classically occurs after 10 years or more of recurrent polyarticular gout. Although intra-articular gouty deposits in the knee are common, our patient did not have a history of acute gouty arthritis tophi elsewhere and in this case tophaceous gout infiltration of the anterior cruciate ligament (ACL) is extremely rare.

Keyword: Anterior Cruciate Ligament Rupture, Tophaceous Gout Arthritis.