

Snapping Knee after Total Knee Arthroplasty

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Abstract

Snapping pes syndrome is rarely seen after total knee arthroplasty which can be confused as periprosthetic joint infection. In our case report; after the exclusion of the possible pathologies, we performed dynamic ultrasound for detection of snapping. After the confirmation, we chose a different treatment modality other than the only case report in the literature which suggests the revision of the components. We preferred a minor approach without arthrotomy by the excision of the osteophyte and tenotomy made by different incision than the index surgery. The patients complaints and pain have been improved dramatically after the time of surgery.

Keywords: Arthroplasty; Snapping knee; Snapping pes

Introduction

Snapping syndrome is defined as a sudden jerk of movement of the related joint during the range of motion and rarely observed in the knee [1]. Several cases of snapping in the medial knee, defined as snapping pes syndrome (SPS), reported in the literature [1-8], but there is only one case which is after total knee arthroplasty (TKA) and treated with revision [2]. In this case report, we present the second case of SPS after TKA and treated with a different method rather than the revision.

Case Report

A 79-year-old female with 15° of varus osteoarthritis underwent left TKA. Patient was pain free until the third week postoperatively. Since then the patient complained about the insidious and severe pain localized in the medial side of the knee during the range of motion of the joint. Physical examination was not significant and acute phase reactants were not elevated. Rest and painkillers were prescribed. One week after the last follow-up complaints of the patient got worsen and palpable snapping and pain during the 20° to 40° of knee flexion were felt in the posteromedial part of the knee. Plain radiographic evaluation had shown osteophyte located on the posteromedial side of the tibial tray and computed tomography (CT) showed overhanging of 13.4 mm osteophyte at the posteromedial part of the tibia and there was no misalignment of the components neither any misrotation (Figures 1 and 2). Local anaesthetic injection was performed to the painful area but did not exceed the patient's pain. Dynamic ultrasound (DUS) evaluation showed pes anserinus translocation over the posteromedial tibial osteofit during 10° to 40° of flexion. The distinction of pes anserinus tendons which was responsible could not be distinguished. Tibial osteophyte excision was planned. Under general anesthesia snapping was disappeared. Osteophyte excision was performed and with posteromedial approach. During abduction of the hip gracilis and semitendinosus tendons noted to be tight and because of that release of these two tendons were performed. Instability was not encountered during the operation and immediate relief of the complaints was noted.

Discussion

SPS is an unusual cause of pain after TKA. One case has been reported in the literature and treated by excision of the osteophytes on the medial aspect of tibia with medial parapatellar arthrotomy [2]. They also revised the insert because of the occurrence of mediolateral instability after resection of the osteophyte. In our case we excise the osteophyte and release the hamstrings through posteromedial approach to prevent complications like infection and to provide more comfortable postoperative rehabilitation.

There are four medial knee SPS case series reported in the literature and the authors couldn't identify the etiology of 7 patients [1,3-5]. The authors have theorized that this condition may result from a congenital malformation or degradation of the accessory tendinous expansions of the semitendinosus. One of patient had a trauma incident of 9 months [3], one case had a loose bone [6] and the other had osteochondroma on the medial side of the knee [7]. Both cases were resolved after the resection. Moreover; In another case, snapping occurred due to sartorius translocation on large medial parameniscal cyst had been resolved after cyst decompression with limited meniscectomy [8].



Figure 1: Roentgenogram of the tibial osteophyte.

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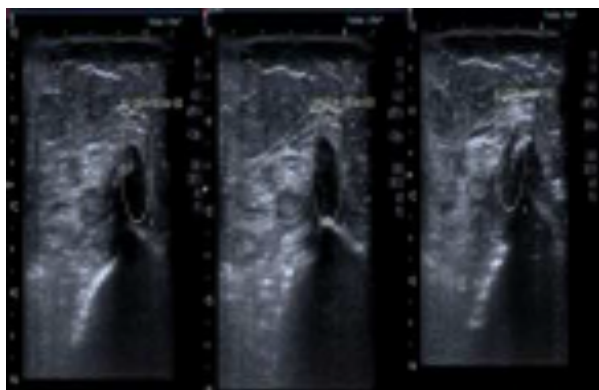


Figure 2: Dynamic US of snapping pes anserinus.

Residual osteophyte seems to be reason for the snapping of the pes and demonstration of the translocation of the hamstrings over osteophyte by DUS evaluation also supports this theory. Another cause that can be blamed is the acute correction of acquired various deformity may result tension in the medial compartment, especially in the presence of shortened hamstrings. It may be beneficial to stretch the hamstrings in advance varus gonarthrosis before the surgery to overcome such problems. DUS evaluation may be the choice of diagnostic tool, if components are not misaligned and infection is ruled out, for the patients whom suspected tendon pathologies or unspecified pain after TKA.

We evaluated many treatment options for our case such as; hamstring tenotomy, hamstring tendon lengthening, botox application, and osteophyte excision with medial parapatellar arthroscopy or combination of these modalities. The disappearance of snapping under general anesthesia may put botox injection and hamstring stretching treatments in the first place. Botox injection may gain us 6 months without muscular tonus and give chance to apply stretching exercises for the hamstrings. But the patient's advanced age, acute severe pain and due to the possibility of failure risk, tenotomy and osteophyte excision was preferred.

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