



## Case report of Pes Anserine bursitis in patients undergoing radiofrequency ablation of genicular nerves of the knee for knee osteoarthritis

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Date of Submission: 10-06-2023

Date of Acceptance: 25-06-2023

### ABSTRACT

Pes anserine bursitis (PAB) is one of the most common causes of knee pain. Patients in early stages of osteoarthritis of the knee undergo minimally invasive treatment like Radiofrequency ablation(RFA) of the genicular nerves of the knee.It is a safe procedure with negligible adverse effects. In the literature, very few case reports of adverse effects after RFA have been reported. We report one such case of a side effect following RFA of the knee. A 55-year-old female with presented to our clinic with knee pain and was diagnosed with grade 3 osteoarthritis. She was treated with RFA of the knee joint.Patient returned back with complaint of severe pain,tenderness and swelling along the proximal medial tibia.Clinical examination pointed towards PAB which was further confirmed radiologically showingmild hypoechogenicity with mild swelling at the pesanserine tendon insertion. Ultrasonography (USG) guided injection was given into the PAB ,after which patient significantly improved clinically.

**KEY WORDS:** Pes anserine bursitis, knee osteoarthritis, Radiofrequency ablation

### I. INTRODUCTION

Osteoarthritis (OA) of the knee joint is one of the most common degenerative diseases encountered in day-to-day practice.For years,it has been a major challenge to provide OA patients with efficient treatment with minimal side effects and long-term efficiency.Minimally invasive procedures and new tissue- engineering-based strategies have shown promising results for the treatment of moderate OA<sup>1</sup>

Genicular nerve radiofrequency ablation (GNRFA), has been used increasingly in the management of symptomatic knee osteoarthritis (OA). This new and innovative treatment option has the capacity to decrease pain and improve function and quality of life in certain patients.

GNRFA is reserved for patients with symptomatic knee OA with failure of conservative treatment and are poor candidates for surgery. GNRFA has been shown to consistently provide short-term (3 to 6-month), and sometimes longer, pain relief in patient<sup>2</sup>.RFA is a minimally invasive procedure with low spectrum of side effects which include injection site irritation, haematoma formation ,neuritis and very rarely infection.

The term “pesanserinus” refers to the conjoined insertion of the sartorius, gracilis, and semitendinosus muscles along the proximal medial aspect of the tibia. These three muscles are primarily flexors of the knee and aid the knee against rotatory and valgus stress.<sup>3-5</sup>

In pes anserine bursitis, the fluid-filled bursa in the conjoined insertion of the three hamstring muscles becomes inflamed and this results in painIt can cause discomfort and also limits the individual's function. This condition is also known as pes anserinus bursitis or anserine bursitis.<sup>6-7</sup>

We chose to report this case as the incidence of Pes anserine bursitis following RFA is extremely low and no major literature has shown this so far.This was the first case of incidence of Pes anserine bursitis following RFA in our pain clinic.

### II. CASE REPORT

A 55-yr-old female with no comorbidities presented to our pain clinic with Left knee joint pain since 3 years, which aggravated with activities.Hergeneral physical examination was unremarkable. Pain was assessed by numerical rating scale (NRS) which was 8/10 and functional abilities were assessed by Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) score which was 45%. The knee joint on inspection was normal. On palpation,medial joint line tenderness was present, and palpable crepitus with a normal range of motion was observed. Systemic examination was normal.Her



blood parameters were within normal limits. After clinical and radiological examination, a diagnosis of bilateral knee osteoarthritis of grade 3 according to Kellgren & Lawrence was made. She was advised to undergo RFA of genicular nerves. Under all aseptic precautions and under prophylactic antibiotic coverage, conventional RFA of 3 genicular nerves (superomedial, superolateral & inferomedial) of the left knee was performed at a temperature of 75°C for 90 seconds under USG guidance. Anti-neuropathics and a short course of NSAIDs were prescribed. She was observed for 2 hrs and discharged home with instructions to avoid weight-bearing activities and strenuous work for a few days.

The patient returned after 15 days with severe pain, tenderness and swelling along the proximal medial tibia. Pain was assessed by NRS which was 9/10 and functional abilities were assessed by WOMAC score which was 60%. On examination, there was tenderness and mild swelling on the inferomedial part of knee joint. USG of the knee revealed mild hypoechogenicity with mild swelling and mild anechoic effusion related to the tendons at the pes anserine tendon insertion.

Patient was put on analgesics, advised cold fomentation and infrapatellar belt for 7 days. Patient returned back with no significant pain relief and hence patient was posted for PES Anserine bursa injection under USG guidance. Standard ASA monitors were connected. Procedure was done under strict aseptic precautions. Injection procedure was done under USG guidance using high frequency linear probe of 5-12MHz. Local anaesthesia was given with 1-1.5 ml of 2% lignocaine solution using 26 gauge needle. Then 4 ml of a mixture containing 40mg triamcinolone diluted in 0.25% bupivacaine was given into the Pes anserine bursa using 23G Quinke Babcock needle.

After the procedure, injection site was covered with adhesive bandage which was asked to be removed after 2-3 hours. Icing the injection site area was also advised to the patient to counteract the needle pain. Oral analgesics was prescribed for 2 days. Patient had pain relief during 15 days follow up period with NRS of 2/10 and WOMAC score of 15%.



Figure 1: USG scans: show mild hypoechogenicity denoting pes anserine bursitis

### III. DISCUSSION

RFA is a safe and a non-invasive treatment modality that is easy to use with minimum skills and with a low incidence of side effects. The most common events reported in the literature are pain, injection site irritation, haematoma formation, neuritis and very rarely infection.

Knee Osteoarthritis is the most commonly reported joint disease in the knee, associated with intra-articular and periarticular structures such as ligaments, subchondral bones, capsules, tendons, muscles, and bursa<sup>8</sup>. Pes anserine bursitis is among the most important causes of periarticular pain<sup>9</sup>.

In our case, despite following the utmost aseptic precautions and adhering to conventional protocol, the patient developed PAB. The only triggering factors in this patient were moderate obesity and an intermittent excessive activity few days after RFA against medical advice. We ruled out other causes which may have similar presentation such as pre-existing PAB or any history of trauma or strain of the knee after thorough clinical & diagnostic evaluation.

### IV. CONCLUSION:

To conclude, this case highlights the fact that although RFA is considered safe, unwanted adverse reactions may rarely occur, especially in patients with moderate obesity and excessive strain over the knee joint. Procedural changes like lesser needle handling, using a needle of lesser diameter (higher gauge) and final position of the needle being more close to the joint line and slightly farther from the triple tendinous attachment



could decrease the incidence of Pes anserine bursitis following RFA. Its early detection and management are important and can significantly improve pain and function and hence positively impact the patient's quality of life.<sup>10</sup>

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