

CASE REPORT

Rupture of pes anserine bursa in a patient with pes anserine pain syndrome due to osteoarthritis

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Abstract : Pes anserinus pain syndrome is a common, clinically defined condition that is characterized by pain around the medial knee and tenderness over the upper medial tibia. The anserine bursa could be the site of proliferative and inflammatory conditions due to knee osteoarthritis, leading to pain and fluid retention. However, rupture of the pes anserinus is rare. Herein, we present a case of rupture of the pes anserine bursa in a patient with pes anserine pain syndrome and osteoarthritis. Physicians should consider rupture of the pes anserine bursa as a differential diagnosis of acute unilateral lower leg swelling. *J. Med. Invest.* 66 : 211-212, February, 2019

Keywords : acute unilateral swelling, differential diagnosis, osteoarthritis

INTRODUCTION

Pes anserinus pain syndrome (PAPS), previously known as anserine bursitis, is a common, clinically defined condition that is characterized by pain around the medial knee and tenderness over the upper medial tibia (1).

Pes anserinus refers to conjoined tendons of the sartorius, gracilis, and semitendinosus muscles, which resemble the footprint of a goose (1) (Figure 1). The anserine bursa could be the site of proliferative and inflammatory conditions due to knee osteoarthritis, leading to pain and fluid retention. However, rupture of the pes anserinus is rare.

Herein, we present a case of rupture of the pes anserine bursa in a patient with pes anserine pain syndrome and osteoarthritis.

CASE REPORT

A 59-year-old woman having knee osteoarthritis noticed sudden swelling in her right knee just after hearing a “pop” sound from the knee while walking and presented to our hospital with isolated swelling of the right calf with no redness (Figure 2 arrow). No pain or heat sensation was felt in the knee or calf. We first suspected deep vein thrombosis, thrombophlebitis, cellulitis, or ruptured Baker’s cyst from unilateral swelling of the legs. However, imaging studies of computed tomography (CT) (Figure 3 A,B) and T2-weighted magnetic resonance imaging (Figure 2C) of the right calf showed fluid retention and blood in the right soleus muscle, knee joint space narrowing consistent with knee osteoarthritis. We next suspected soleus muscle bleeding because of vascular malformation, such as an arterial aneurysm or coagulation abnormality; however, CT angiography and laboratory tests showed no abnormality. Careful observation of the CT scans revealed fluid retention

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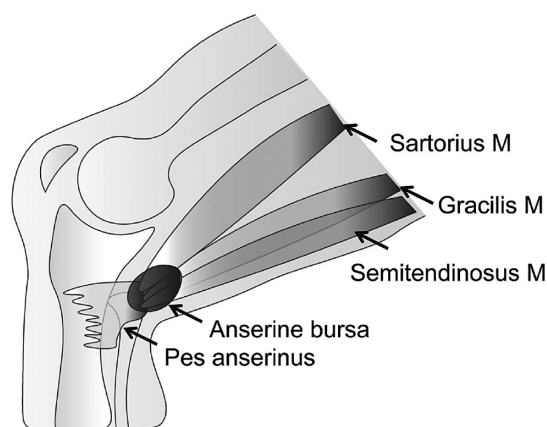


Figure 1. Diagram of the pes anserinus and pes anserine bursa (M : muscle)



Figure 2. Image showing swelling in the right calf

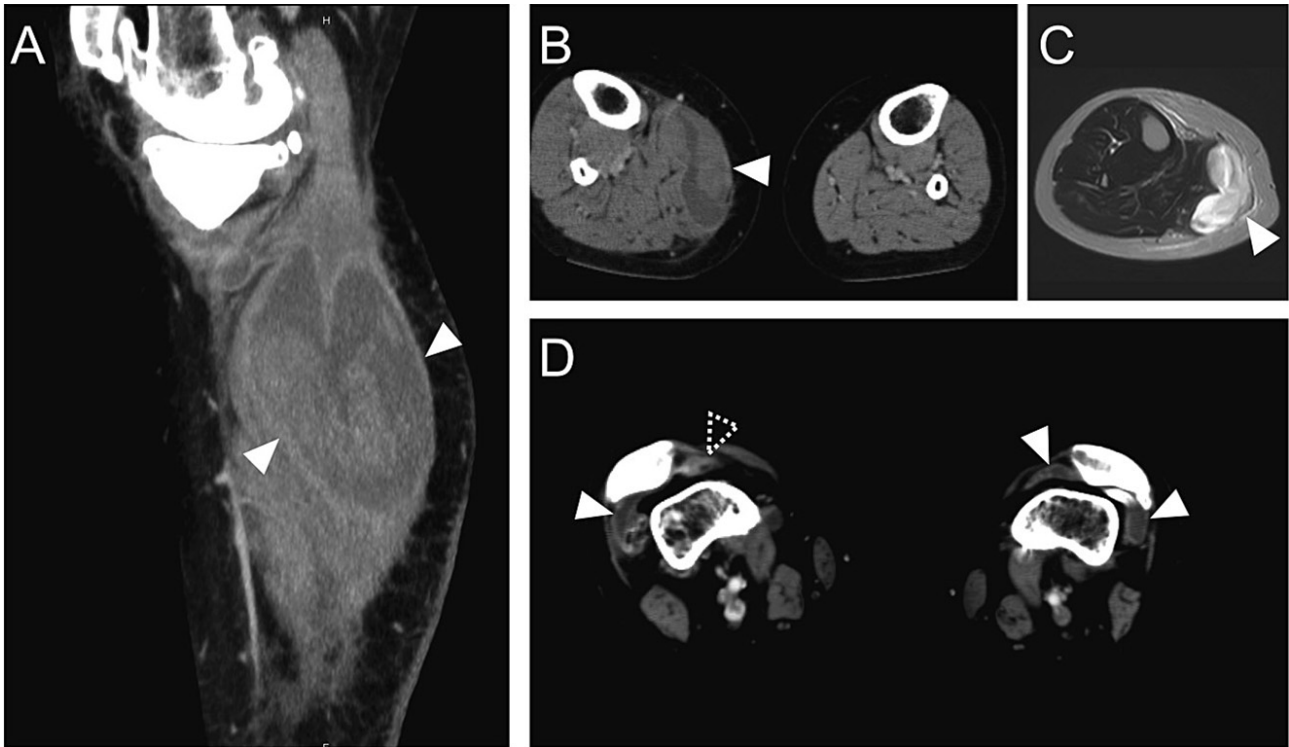


Figure 3. Computed tomography (A, B) and T2-weighted magnetic resonance imaging images (C) showing fluid retention and blood in the right soleus muscle. Computed tomography image (D) showing fluid retention in the unruptured synovial bursa (solid arrow) and ruptured collapsed synovial bursa (dotted arrow).

in the unruptured synovial bursa (Figure 3 solid arrow ; D) and ruptured collapsed synovial bursa (dot arrow ; D). We diagnosed her with PAPS, resulting in rupture of the anserine bursa by walking and complicated with bleeding. Her symptoms gradually improved without specific treatment.

DISCUSSION

PAPS should be suspected in patients with medial knee pain on activities such as rising from a chair, ascending or descending stairs, and lying in bed with one knee pressing the other ; patients with knee osteoarthritis with rapidly increasing knee pain ; and patients with known knee osteoarthritis reporting transition from pain with activity to pain at night (<https://www.uptodate.com/>).

Risk factors for PAPS include diabetes, female sex, obesity, knee osteoarthritis, and knee malalignment (2) ; however, the pathophysiology of PAPS is remains unknown. Until now, only two cases of rupture of the pes anserine bursa have been reported in patients with PAPS (3, 4), indicating that rupture of the pes anserinus is rare.

Differential diagnoses of acute unilateral swelling of the calf include thrombotic diseases, such as deep vein thrombosis, and bleeding diseases, such as those characterized by muscle bleeding. Administration of anticoagulant treatment to a patient suffering from a bleeding disease could exacerbate leg swelling. Thus, imaging studies should be an essential part of the assessment in order to make an appropriate diagnosis.

The high prevalence of PAPS in patients with knee osteoarthritis, obesity, and angular deformity of the knee strongly suggests that mechanical derangement within the medial knee joint causes referred pain in the upper medial tibia (<https://www.uptodate.com/>).

If the anserine bursa retains synovial fluid due to chronic inflammation from knee osteoarthritis, mechanical stress from walking might induce the rupture of anserine bursa. Reduction of the mechanical burden of the knee or increased muscle-support of the joint contribute to the prevention of recurrence of PAPS. Therefore, weight-reduction programs or quadricep-strengthening exercises can reduce the incidence of this condition.

Physicians should also consider rupture of the pes anserine bursa as a differential diagnosis of acute unilateral lower leg swelling.

CONFLICT OF INTEREST

The authors have no conflicts of interest to disclose.

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