Iliopsoas Muscle Necrosis Caused by Intrapelvic Extension of an Iliopectineal Bursitis Complicating Femoral Head Necrosis

Case Report and Literature Review

C. Kurze, M. Keel, K.A. Siebenrock, M.C. Attinger
Department of Orthopaedic Surgery, Inselspital, University of Bern, Switzerland

Background (1-4)

- Iliopsoas bursitis is associated with various hip diseases such as osteoarthritis, trauma, rheumatoid arthritis and osteonecrosis
- Iliopsoas bursitis might develop symptoms due to compression of the adjacent anatomical structures presenting with groin pain, reduced ROM and leg swelling
- In severe cases, complications as femoral nerve palsy or iliopsoas muscle necrosis have been described
- Chronic inflammation of the arthritis hip joint might lead to excessive fluid production that is pumped through a valve-like communication between the joint capsule and the iliopectineal bursa
- Differential diagnosis include inguinal hernia, lymphoma, aneurysm of the femoral artery and abscess

Case Report

- 78-year-old male after renal transplantation with immunosuppressing medication (cyclosporin) presenting with left groin pain, inguinal swelling and femoral nerve palsy
- MRI showing severe femoral head necrosis with a large fluid collection antero-medial to the hip joint that communicates with the joint and extends along the iliopsoas tendon into the iliopsoas muscle (Fig 1)
- Smith-Peterson approach and anterior arthroscopy for debridement and drainage of the extensively necrotic and hemorrhagic iliopsoas muscle
- Intraoperative finding confirmed femoral head necrosis with secondary osteoarthritis and the valve-like connection between the joint and the iliopectineal bursa
- Due to recurrent symptomatic fluid collection and progression of the femoral head necrosis decision for resection arthroplasty in order to cease pathological fluid production
- At the 3 months follow-up, clinical improvement without recurrence of the swelling or groin pain and improved hip flexion force

Discussion and Conclusion

- Femoral head necrosis and rheumatoid arthritis is a common cause of iliopsoas bursitis (1, 4).
- A communication between the iliopectineal bursa and the hip joint is present in up to 15% of the human population (1, 3). A valve-like mechanism as a prerequisite to produce a giant bursa able to compress adjacent anatomical structures has been described previously (1).
- Several case reports described intrapelvic extension of the iliopectineal bursa along the iliopsoas tendon (2, 3). Severe complications such as femoral nerve palsy might develop (1). Massive iliopsoas muscle necrosis has not been described yet.
- Treatment options of iliopsoas bursitis include percutaneous puncture with or without local steroid application. In rheumatoid patients additional DMARD and systemic corticosteroids might be helpful (5). In severe cases with compression of local structures surgical evacuation might be indicated. In our opinion, surgery should be performed to decompresse the iliopsoas muscle and the femoral nerve, gain microbiological analysis to rule out infection and secondly, in cases of advanced osteoarthritis, to break the ongoing synovial fluid production by resecting the femoral head or implanting a total hip prosthesis.