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CASE REPORT

AN ATYPICAL CASE OF ILIOPSOAS BURSITIS WITH OVARIAN CYST RUPTURE IN THE FMF PATIENT: RADIOLOGICAL AND CLINICAL FINDINGS

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ABSTRACT

FMF is characterized by recurrent fever, peritonitis, arthritis, pleuritis and secondary amyloidosis. Iliopsoas bursitis due to its unspecific symptomatology is an often-underdiagnosed entity in the chronic pelvic pain. Also one of the reason of the acute pelvic pain in reproductive age is ovarian cyst rupture. A 22 year old woman with FMF disease admitted to obstetric and gynecology department with chronic right hip and pelvic pain. Transvaginal sonographic examination showed free fluid in the pouch of Douglas that was presumed ovarian cyst rupture. The patient was referred for MRI examination because of chronic hip pain which showed the iliopsoas bursitis communicating with the coxofemoral joint. To the best of our knowledge, this is the first case in the literature which presented with acute pelvic pain and chronic hip pain with ovarian cyst rupture and iliopsoas bursitis in FMF patient.

INTRODUCTION

Familial Mediterranean fever (FMF) is a hereditary inflammatory disorder characterized by the manifestation of symptoms such as recurrent episodes of fever with serosal, synovial, or cutaneous inflammation. Joint attacks mainly occur in large joints, especially in the legs. Usually, only one joint is affected. Seventy-five percent of all FMF patients experience joint attacks. May be diagnosed as rheumatoid arthritis, osteo-arthritis, bursitis, tennis-elbow etc (1). The reproductive tract is the commonest source of spontaneous hemoperitoneum in women of childbearing age. After ruling out an ectopic pregnancy, rupture of an ovarian cyst is the most common cause of spontaneous hemoperitoneum in nonpregnant patients (2). We present an atypical case of iliopsoas bursitis with ovarian cyst rupture in the FMF patient.

Case Report

A 22 year old woman admitted to obstetric and gynecology department with two days history of pelvic pain. Vaginal examination showed painful uterine movement. Physical examination showed tenderness in lower quadrant of abdomen, right groin and hip. A transvaginal sonographic examination demonstrate moderate free fluid in the pouch of Douglas and 28x26 mm hypoechoic simple cyst in the right ovary. Doppler examination is in normal limit. The patient was febrile (37.5).

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Laboratory investigation showed human chorionic gonadotrophine 3, eryt hrocyt sedimentation rate 43 mm/h, C reactive protein 111 mg/dl, white blood cell count 13.000 and the others (complete blood count, biochemical analysis, tumor markers, rheumatoid factor and inflammatory markers) were within normal limits. The patient was diagnosed with FMF before three years ago and appendectomy was performed. She was used colchicine theraphy irregularly for 3 years. The patient was referred for an abdominal sonographic examination showed that a 53x34 mm, anechoic cystic mass with well defined margin and include hyperechoic internal septation near the right psoas muscle (Figure 1).

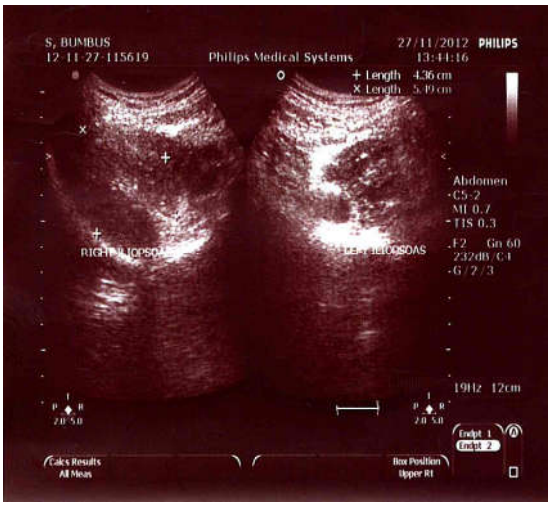

Figure 1: Sonographic examination showed, 53x34 mm anechoic cystic mass with well defined margin and include hyperechoic internal septation near the right psoas muscle.

Also free fluid in the Douglas pouch and 28x26 mm anechoic simple cyst in the right ovary were seen in abdominal sonography. MRI examination of the hips and pelvis was performed. MRI examination revealed a thin-walled purely cystic lesion with internal septation and well defined margin (with homogenously low signal in T1-weighted sequences and high signal in T2-weighted sequences) measuring 15x5x3 cm at the right side of the pelvis extending from the right iliac fossa to the anterior aspect of the coxofemoral joint coursing below the iliacus muscle and iliopsoas tendon (Figure 2, 3, 4). Communication of the lesion with the hip joint was also demonstrated (Figure 5). Imaging findings were strongly indicative of an extremely distended iliopsoas bursa. Unilateral moderate joint effusion was apparent in the right hip joint.

DISCUSSION

FMF is an autosomal recessive disease characterized by recurrent episodes of fewer accompanied by peritonitis pleuritis and arthritis. The presence of the bursitis in FMF patient is rare but the relationship between FMF and bursitis is revealed. The iliopsoas bursa is the largest bursa in the body (3). It lies anterior to the hip joint next to the femoral neurovascular bundle and iliopsoas muscle. The bursa communicates with the hip joint in 15% of individuals (4). Normally, the bursa is not visualized on imaging modalities. It is only visualized when it is distended according to the inflameted or infected. Iliopsoas bursitis is often assosiated with both inflamatory and degenerative disorders of the hip joints.

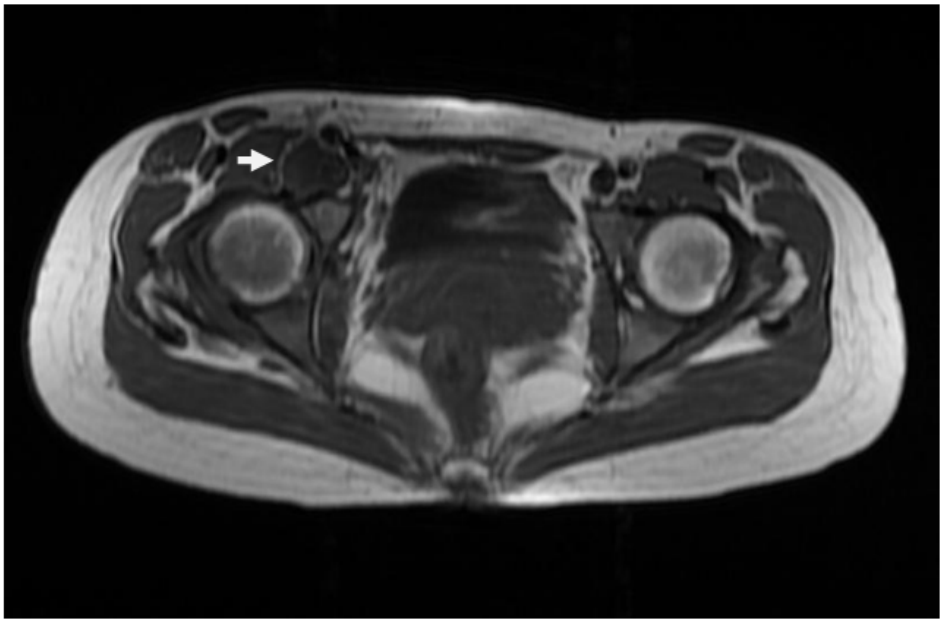

Figure 2: Axial T1 weighted spin echo image. A well defined, 3x5 cm homogeneous low signal intensity mass (arrow) lying anterior to the anteromedial capsule of right hip joint, displacing the psoas muscle laterally and the femoral neurovascular bundle anteromedially.

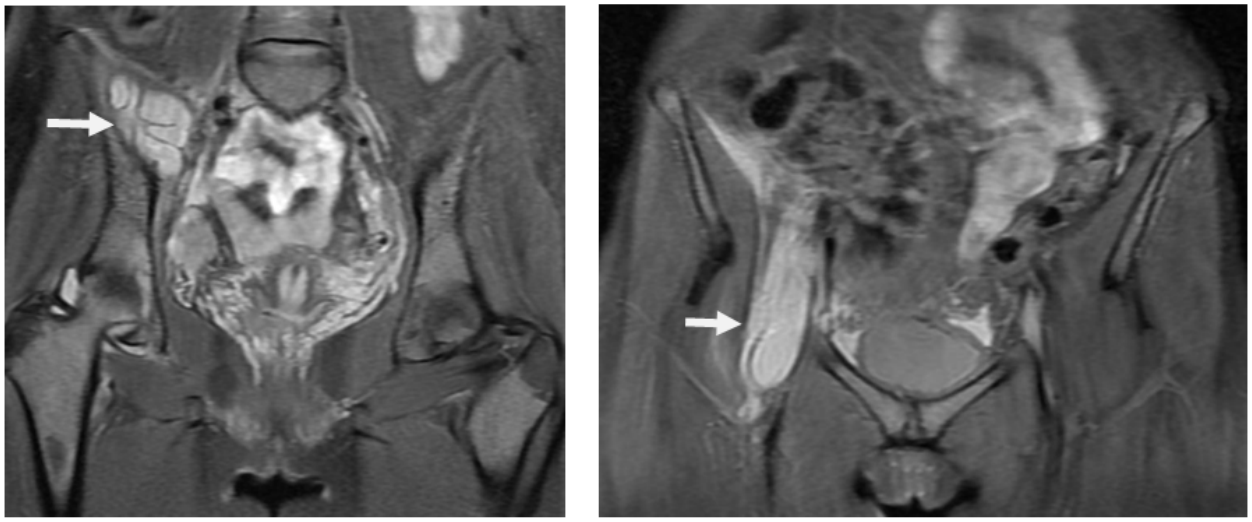

Figure 3, 4: Coronal T2 weighted spin echo image. A well defined 15x5x3 cm lesion with internal septation and homogenously high signal intensity mass (arrows) lying at the right side of the pelvis extending from the right iliac fossa to the anterior aspect of the coxofemoral joint coursing below the iliacus muscle and iliopsoas tendon

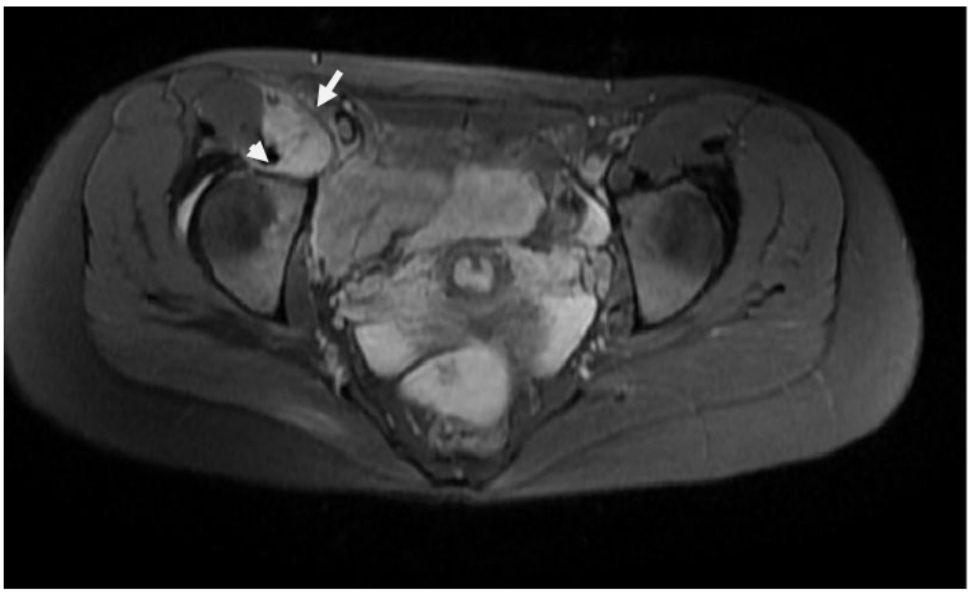

Figure 5: Axial T2 weighted fat saturated image. A well defined, 3x5 cm homogeneous high signal intensity mass (arrow) lying anterior to the anteromedial capsule of right hip joint, displacing the psoas muscle laterally and the femoral neurovascular bundle anteromedially. Communication of the lesion with the hip joint was also demonstrated (arrow head).

Such as rheumatoid arthritis, osteoarthritis, pyogenic inflamation, repetetive trauma, sports injuries, avascular necrosis, synovial chondromatosis and tuberculosis (5). Our case is an interesting because a distended painful bursa was presenting with ovarian cyst rupture in the FMF patient. It is the first case in the literature which assosiated with FMF disease. Ovarian cyst rupture and hemorrhage are basically physiological events that involve the follicle or corpus luteum, but when the hemorrhage is large or a considerable quantity of fluid is released from a cyst into the peritoneal cavity, this may result in acute abdominal pain and/or pelvic pain from peritoneal irritation (6). In our case, both acute pelvic pain and free fluid in the Douglas pouch observed by sonography gave rise to thought ovarian cyst rupture. Operation was not considered because of the cyst rupture was restricted. Various theories have been proposed in order to explain the causative relation of hip pathology and iliopsoas bursitis, such as

a) Overproduction of fluid in a pathologic hip joint and protrusion of synovium in the iliopsoas bursa,
b) Via direct communication of iliopsoas bursa and hip joint,
c) Hypertrophy of iliopsoas bursa lining and subsequent fluid accumulation,
d) Via an acquired communication of iliopsoas bursa and hip joint due to weakening of their walls due to age and concomitant pathology (7).

The patient often presented with groin and hip pain. These symptoms are not spesific and thus it may be overlooked and misdiagnosed. Symptoms depend on size, mass effect and anatomic relation of the distended bursa to the surroundings structures (compression of adjacent femoral vein or nerve). The physical examination sometimes showed groin or lower abdominal palpable mass in less weighted patient. Radiologic modalities are most important to demonstrate the distended iliopsoas ******* iphic examination is often the first choice be(sy to apply, not contain radiation and low costs. It can demonstrate the cystic nature of the lesion and its anatomic relationship with adjacent structures. But the relation of the lesion with anatomic structures shown poorly and it is one of the disadvantages of the sonographic examination. So that computed tomography (CT) and MRI are recommended. Because of high soft tissue resolution and an absence of the radiation exposure MRI is most comfortable. And it is most accurate for demonstrating size, shape, nature and hip joint communication. And also it was helpful to determine the cause of iliopsoas bursitis in some of the cases, including degenerative osteoarthritis, chronic inflammatory polyarthritis, and acute bacterial arthritis. Nature of the lesions are so important for the cause of iliopsoas bursitis. Hemorrhage or inflamation may cause internal echoes in US and heterogeneous signal in MRI. Differential diagnosis of a distended iliopsoas bursa includes inguinal lympadenopathy (of inflammatory or neoplastic etiology), femoral or inguinal hernia, undescended testis in male patients, psoas abscess and vascular abnormalities of the femoral vessels (femoral artery aneurysm) (7). Treatment of iliopsoas bursitis depend on patient's symptoms. Treatment starts with conservative methods such as rest, avoided exaggerated movements and oral NSAIDs.

If the symptoms get worse aspiration of fluid, steroid injections and more invasive therapeutic approaches such as bursectomy, synovectomy or eve' total hip replacement were done. In our case, the patient heal up with conservative treatment methods such as rest, avoided exaggerated movements and medical therapy with NSAID's and colchicine. No recurrence was observed in the follow-up period of the patient. In our best knowledge, this is the first case in the literature which presented with acute pelvic and chronic hip pain with ovarian cyst rupture and iliopsoas bursitis in FMF patient.

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