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Case report

Psoas fistula and abscess in a patient with Crohn's Disease presenting as claudication and hip arthritis

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SUMMARY

Crohn's disease is characterized by chronic intestinal inflammation and not rarely by extraintestinal manifestations. Psoas abscess and fistula is a rare complication of Crohn's disease, which is sometimes difficult to diagnose in the early stage. We describe the case of a 22-year-old male patient with Crohn's disease who presented to us with difficulty in walking and pain in the area of the right hip. A MRI scan of the hip joints was negative for aseptic necrosis of the head of femur. An ultrasound examination of the lower abdomen was also negative, as were the X-rays of the sacral bone and sacroiliac joints. The patient was treated with non-steroidal anti-inflammatory agents but his condition worsened and he developed diarrhoea. Subsequently, he developed fever and local tenderness of soft tissues of the right hip and buttock. A C/T scan at this stage revealed a psoas abscess and a fistula in the area of psoas muscle. The patient was treated with antibiotics and octreotide and his condition improved dramatically and the symptoms resolved. The differential diagnosis of sudden onset of claudication and pain in the hip in a patient with Crohn's disease should include the presence of a psoas abscess.

Key words: Crohn's disease, claudication, psoas abscess, psoas fistula, hip pain.

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Abbreviations: CRP: C reactive protein, ESR: Erythrocyte sedimentation rate, US: Ultrasonography, CT: Computed Tomography, MRI: Magnetic Resonance Imaging.

INTRODUCTION

Crohn's disease is characterized by a chronic inflammation of the bowels, which extends to the deeper layers of the intestinal wall.[1] It may involve every part of the gastrointestinal tract, but in the majority of cases it mainly affects the terminal ileum and/or the colon. The disease is characterized by the presence of extraintestinal manifestations and perianal complications in about 30% of patients,[2] as well as the development of intra-abdominal or pelvic abscesses in 10-30%.[3] The activity of intestinal disease is directly related to the presence of perianal complications, but this is not an absolute rule.

Perianal complications of Crohn's disease include external hemorrhoids, anal fissures, perianal abscesses and various types of fistulas.[4] The most common types of fistulas are the perianal and the enterocutaneous ones. In some cases the identification of a fistula and its correlation with the clinical symptoms may be very difficult.[5] There are only a few reports in the literature of psoas abscesses and fistulae in patients with Crohn's disease.[6-8]

We describe a Crohn's disease patient who developed a psoas abscess and presented to us with hip pain and claudication.

CASE REPORT

A 22-year-old male Greek student presented with symptoms of limp and hip pain. The patient had been operated on thirteen months earlier for acute abdomen pain. At the operation, a mesenteric abscess and acute

appendicitis had been observed. He had had an uncomplicated postoperative course. Seven months before his present visit, he had developed suppuration from a perianal abscess. A computed tomography (C/T) scan at this stage had shown an impression of a mass at the terminal ileum including the position of the ileocecal valve, which caused concentric stenosis of the lumen of ileum. The patient had been referred to the Department of Gastroenterology. An ileocolonoscopy had revealed deep ulcers in the terminal ileum, and edema and nodulous appearance of the sigmoid and rectum. The biopsies were compatible with Crohn's disease. A barium follow-through study (enteroclysis) revealed disappearance of normal folds of the terminal ileum and confirmed the concentric stenosis of terminal ileum looking like a hourglass at a 3cm distance from the ileocecal valve (Figure 1). The patient was started on mesalamine 3gr per day per os, and methylprednisolone 32mg per day per os and his symptoms improved. Two months before his present visit, owing to persistence of diarrhea and abdominal pain, he was administered azathioprine 150mg per day. Steroids were reduced gradually to low doses, 8mg per day.

At the time of the patient's emergency visit, he did not have diarrhea or abdominal pain. He had one bowel movement per day, without mucus, pus or blood and he was afebrile. He was defecating without any pain or discomfort. His main concern was the difficulty in walking, although he could walk without help, and the pain in his right hip, which did not let him lie on his right side. The physical examination showed limited movement and tenderness of the right hip joint. The palpation of the lower abdomen did not detect any localized tenderness. The digital examination was not indicative of acute rectal inflammation. The laboratory tests were normal except from the Erythrocyte Sedimentation Rate (ESR), which was 60mm the first hour and C reactive protein (CRP) which was 45mg/dl.

The patient underwent an evaluation by a rheumatologist. The clinical examination revealed tenderness in the movements of the right hip joint and slight limitation of the hip flexion. The x-rays of the sacroiliac joint, pelvis and ischiums were negative. The patient underwent a Magnetic resonance imaging (MRI) scan of the hip joints (Figure 2), which was negative. He was administered methylprednisolone 32mg per day and non-steroidal anti-inflammatory agents, with the probable diagnosis of hip joint arthritis related to inflammatory bowel disease, but his symptoms worsened and he developed diarrhea. Non-steroidal anti-inflammatory agents were discontinued. A few days later, the patient could not walk, and he had to use crutches. His pain on his right hip became unbearable and he developed low-grade fever.

He was admitted to our Department. On physical examination, he was exhausted. The temperature was 37.7°C, the blood pressure 120/70mmHg, the pulse rate was 85 per minute. Heart sounds were normal and lungs were clear on auscultation. The palpation of the abdomen did not reveal any localized tenderness. He had localized tenderness in the soft tissues surrounding the right hip joint. The digital examination caused pain to the patient at this stage. Laboratory tests showed: Hemoglobin: 11.2g/dl, Total white cell count: 9.37k/uL (Neutrophil count: 7.79k/uL), Platelet count: 597k/uL. Creatinine, glucose, aminotransferases, electrolytes, total pro-

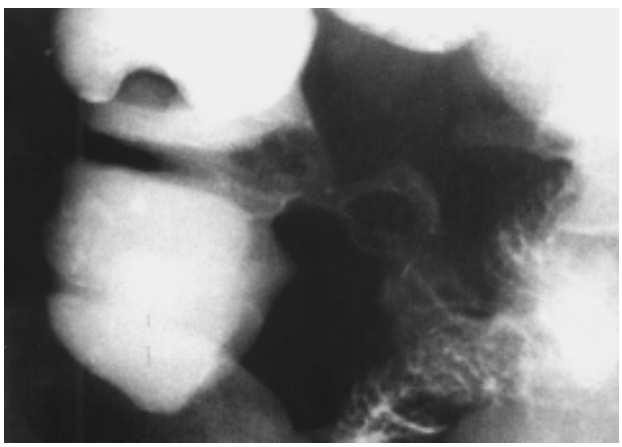

Figure 1. Enteroclysis showing disappearance of normal folds of the terminal ileum and a concentric stenosis at a 3cm distance from the ileocecal valve.

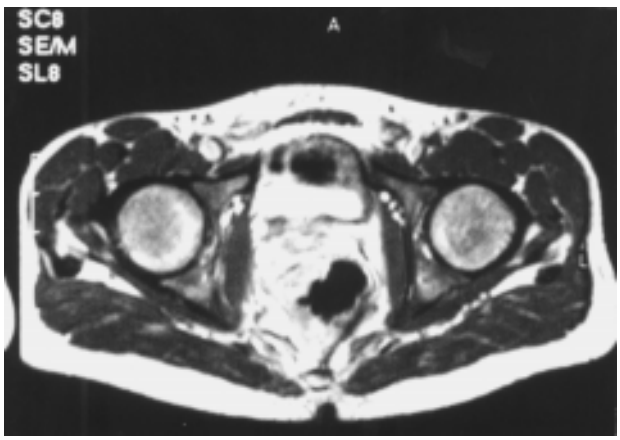

Figure 2. MRI of the hip joints negative for aseptic necrosis of the head of femur.

teins, and albumin levels were within normal limits. ESR was 86mm the first hour and CRP was 203mg/dl. An X-ray of pelvis - sacroiliac joints was done, which was normal. An ultrasound of the lower abdomen did not help. An emergency C/T scan of lower abdomen and pelvis - perineum (Figure 3), was done and revealed an abscess in the right psoas and the presence of a blind enteric-psoas fistula. The patient was treated with total parenteral nutrition, intravenous antibiotics (metronidazole plus second generation cephalosporin plus aminoglycoside), octreotide subcutaneously (0.1μg every 12 hours) and prednisolone 50mg per day intravenously. Methotrexate was substituted for azathioprine. In addition low molecular weight heparin was administered subcutaneously as a prophylactic measure to avoid deep venous thrombosis and pneumonic embolism. The patient had an excellent response to treatment. After a few days, the abscess disappeared and did not require percutaneous guided or surgical drainage and the fistula became inactive having tendency for closing. The patient left the hospital ten days after his admission and he was able to run without any pain or inconvenience. ESR was reduced to 40 mm the first hour and CRP was negative.

DISCUSSION

In 1965, Gray et al[9] described the significance of perianal lesions in Crohn's disease and they underlined that these lesions may precede the intestinal manifestations by many years. The anal canal lesions[10] in Crohn's disease include fissures, ulcers, stenosis, fistulae and abscesses. Fistulae and abscesses may present insidiously, without any apparent orifice, they are usually localized in the perianal region and treatment is rather easy. In other cases the fistulae are more complex and usually result from a subclinical penetration of the intestinal wall by the disease.[4] A previous operation in the abdominal cavity or the perianal region, is in many cases, a triggering factor for the development of various forms of fistulae in patients with Crohn's disease, especially if done as an emergency operation.[11-13]

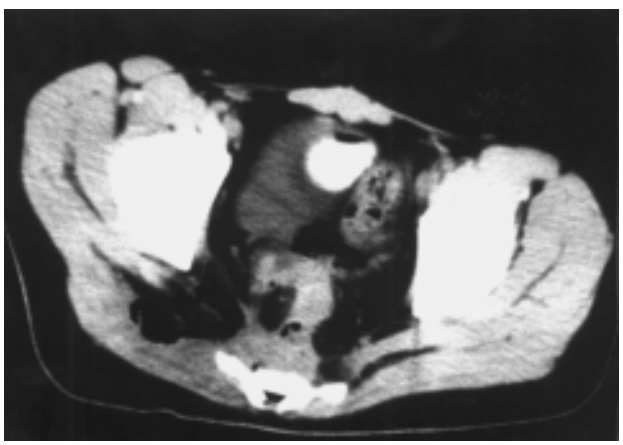

Figure 3. C/T scan of lower abdomen showing the presence of an abscess in the right psoas and of an enteric-psoas fistula.

A spontaneous enterocutaneous fistula can be an early manifestation of Crohn's disease and it usually opens to the anterior abdominal wall through a previous abdominal incision,[13] or rarely through an intact abdominal wall or the umbilicus.[14] If an inflamed bowel loop becomes adherent to the bladder or vagina, an enterovesical or enterovaginal fistula may occur. In other cases a fistula may be connected to a chronic pelvic or retroperitoneal abscess and it may extend along another anatomical region, tracking through the obturator foramen or along the ileopsoas muscle into the hip and thigh.[13,15] In such cases, the clinical symptoms may be misleading or mild and the diagnosis may be wrong or delayed. One must emphasize that on the one hand in patients with Crohn's disease, the diagnosis of a fistula and abscess should always be born in mind, even in atypical sites, and, on the other hand, every atypical or unjustified fistula should generate suspicion of Crohn's disease.

Durning et al[6] described four patients with Crohn's disease complicated by psoas abscess and they underlined that these patients did not have general or abdominal signs of sepsis but they all showed wasting of the right quadriceps femoris and hip flexion. In 1996 cools et al[8] described a psoas abscess in a patient with Crohn's disease. The symptoms included hip contracture and limb pain. The diagnosis was made by C/T scan. They suggested that resection of the fistula and the affected bowel is the therapy of choice. In another case, Mayer et al[15] reported that a spontaneous retroperitoneal abscess in a patient with Crohn's disease does not always terminate at the psoas or iliac spaces but it can pass through the sciatica foramen and result in a buttock or posterior upper thigh abscess.

According to a recent case note study,[16] psoas abscess can be a complication of Crohn's disease, appendicitis, diverticulitis, or metastatic colorectal cancer, while in the past the tuberculosis of the spine was the commonest cause. Diagnosis can be made by U/S, C/T scan or MRI.

The diagnosis of a psoas abscess is made by evaluation of the history, careful physical examination, labora-

tory assessment and imaging studies.[17,18] Symptoms that should arouse suspicion of a psoas abscess in a patient with Crohn's disease are hip pain, difficulty in walking, pain in the buttock or thigh, fever and profundus iliac fossa tenderness. CRP and ESR are almost invariably elevated and also leucocytosis with left shift is usually present.

Treatment of a psoas abscess and fistula in Crohn's disease first of all consists of medical measures such as total parenteral nutrition, 5-aminosalicylic acid products, metronidazole[19] and other antibiotics, immunosuppressive agents[20] and probably octreotide. Octreotide was effective in the closure of pancreatic and gastrointestinal fistulas in some studies.[21,22] Immunosuppressive agents are an important part of treatment, with azathioprine (or its analogue 6-mercaptopurine) and methotrexate being the most widely used in fistulizing Crohn's disease.[20,23-25] Recently a new effective treatment for fistulas in patients with Crohn's disease has become available, the chimeric monoclonal antibody to tumor necrosis factor a (Infliximab).[26] In our case, we did not use Infliximab because it was not available at that time. In the second place, percutaneous drainage of the abscess[27] may be helpful, sometimes C/T assisted.[17] In severe cases, transabdominal resection of the diseased bowel, retroperitoneal debridement and external drainage of the abscess cavity may be necessary.[16] A classic fistulotomy should be performed with extreme caution in Crohn's disease. In general, aggressive surgery should be avoided. It is very important to note that in Crohn's disease the appropriate management of an abscess and fistula is incision and not excision.[28]

In conclusion, we reported an interesting case of a patient with Crohn's disease, who presented with hip pain and claudication owing to a psoas fistula and abscess. Treatment was achieved by conservative medical measures. The differential diagnosis of sudden onset of claudication and pain in the hip in a patient with Crohn's disease should include the presence of a psoas abscess.

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