

## Case Report



# Right Iliac Fossa Abscess Due to Perforated Appendicitis Presenting with Intraabdominal Mass

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## ABSTRACT

Acute appendicitis is one of the most common cause of acute abdomen with the peak incidence in early adulthood. We report a case of right iliac fossa abscess resulting from perforated appendicitis. The patient was an 39-year-old woman who had no apparent abdominal signs. She presented with progressive painful swelling of right lower abdomen and the groin for 2 months. Laboratory tests showed a normal white blood cell and anemia. Computed tomography scan demonstrated the presence of abscess at right inguinal site also communicating with the intraabdominal region. At surgery, there was an abscess due to a perforated appendix. Acute appendicitis may have an atypical clinical presentation and should be treated carefully.

**Key words:** *Perforated appendicitis, inguinal abscess, peritonitis*

## ÖZET

### **Intraabdominal Kitle Olarak Prezente Olan Perfore Apendisit Bağlı Sağ İliak Fossa Absesi**

Akut apandisit en sık akut karın yapan nedenlerin başında gelir. En sık genç erişkinlerde görülür. Perfore apandisit nedeniyle oluşan sağ iliak fossa apseli bir olguyu sunuyoruz. Otuzdokuz yaşında kadın hastanın 2 aydır süren abdominal belirtilerin bulunmadığı, ilerleyici sağ kasık ağrısı ve ağrılı karın şişliği şikayeti vardı. Laboratuvar testlerinde normal beyaz küre sayısı ve anemi vardı. Hastaya yapılan bilgisayarlı tomografide sağ ingüinal bölgede, intraabdominal alanla bağlantılı apse izlendi. Yapılan cerrahi sonrası hastada, perfore apandisit bağlı apse vardı. Akut apandisit, atipik klinik görünümle ortaya çıkabilir ve dikkatlice tedavi edilmedir.

**Anahtar Sözcükler:** *Perfore apandisit, ingüinal apse, peritonit*

Acute appendicitis is one of the most important differential diagnoses in a patient with acute abdominal pain (1). History and physical examination are atypical in up to a third of patients. However, atypical presentations do occur, leading to delayed diagnosis and increased morbidity. Known potential complications of untreated or delayed management of acute appendicitis include appendiceal perforation, periappendiceal abscess formation, peritonitis, bowel obstruction, and rarely, septic thrombosis of the mesenteric vessels. Computed tomography (CT) is a useful modality for diagnosing appendicitis and its complications (2). We present a rare case of ruptured appendicitis with extensive formation of right lower abdominal wall and groin abscess.

## CASE REPORT

A 39-year-old woman was admitted to our hospital in February 2009 with pain in the right groin and buttock. The pain had appeared 2 months before admission, and her symptoms had been relieved at that time by oral analgesics. Physical examination indicated anemic conjunctiva, presence

of a mass at the right inguinal site and mild inflammatory signs, such as local heat and pain in the right buttock. Significant inflammatory changes of the soft tissue of the right lower trunk were noted without any apparent signs of peritonitis. There was painful disability of the right lower extremity. She was lying in a supine position with the right knee joint mildly flexed and hip joint externally rotated, and was reluctant to move her right leg because of severe tenderness. Inspection showed no erythema or skin discoloration in this region. The abdominal examination revealed unremarkable signs during palpation and the peritoneal reaction was absent. No subcutaneous emphysema or crepitation in that area was noted. Blood data indicated a normal white cell count (WBC, 8,700/ $\mu$ l), an elevated C-reactive protein (CRP) level (13.2 mg/dl), and anemia (hemoglobin Hb, 7.3 g/dl). All of the other blood chemistry tests were within the normal range. Chest and abdominal X-ray revealed no abnormality. An abdominal ultrasound scan suggested an abscess in the right lower quadrant, with heterogenic echotexture and a thickening of the ileocecal tract. CT scanning of the abdomen demonstrated the presence of an

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abscess at the right inguinal site, which was also communicating with the intraabdominal region. Abscess formation was noted on the medial side of the right iliac crest (Figure 1). On the first day of hospitalization, aspiration of the right inguinal site produced pus, which was found to contain *Escherichia coli* on microbiological examination. The patient underwent a laparotomy immediately for exploration, which revealed more than 800 mL of feculent fluid collection in the above-mentioned locations. Appendectomy and drainage of the peritoneal abscess cavity were performed and necrotic subcutaneous tissue was excised. Painful disability of the right thigh improved immediately after surgery and she was able to walk 2 days later.



**Figure 1.** Abdomino-pelvic CT scan reveals a 9x12 cm right iliac fossa abscess (arrow).

## DISCUSSION

Acute appendicitis is the most common abdominal emergency worldwide, with an incidence of approximately 7% in the Western world; it can usually be managed smoothly even if the appendix is perforated (3). Currently, there is no test or objective physical finding that can rule out the presence of appendicitis with acceptable accuracy. Suppuration following acute appendicitis is well known and occurs in 3-9% of cases of acute appendicitis (4). The causes of abscess formation are typically unclear before surgery and patients are usually critical

on presentation. Abscess formation commonly occurs in the pelvis, between intestinal loops, and in the subphrenic space.

Clinching the diagnosis of perforated appendicitis and iliac fossa abscess often depends on a high degree of suspicion and the timely acquisition of appropriate imaging studies. CT scan is a major adjunct to prompt diagnosis and should, therefore, be considered in all cases of abdominal wall/lumbar region sepsis to detect an intra-peritoneal source. CT scan of the abdomen not only helps in the establishment of the diagnosis, but also in the evaluation of the extent of involvement and in its treatment (5).

Iliac fossa and psoas abscess are generally considered primary when they are the result of hematogenous spread and when the most frequent agent is *S. Aureus* (6). Iliac fossa abscess is considered secondary when it is related to infection in adjacent organs, such as the colon, jejunum, ureters, kidneys, pancreas, appendix, spine, and lymph nodes, and the microorganisms most frequently involved are enterobacteria (6, 7).

The abscess in this report can be explained by the direct contamination of the right anterior abdominal wall and groin by an inflamed phlegmenous appendix. The spread of resultant sepsis along the abdominal wall muscles, preperitoneal space, and downward behind the inguinal ligament into the thigh presented clinically as an abscess (8). In this case, bacterial examination revealed the organism *Escherichia coli*, which suggested an intestinal involvement.

Early recognition of an abdominal source of sepsis with appropriate treatment can improve survival. The treatment of appendiceal abscesses is still a matter of discussion and many different approaches are currently adopted. Expectant management, consisting of intravenous antibiotics, percutaneous drainage, and interval appendectomy at a later date, is gaining general acceptance as it seems to be associated with less morbidity and a shorter overall hospital stay (9, 10).

We conclude that a search for the presence of intraabdominal pathology by a thorough clinical and radiological evaluation should be conducted in all patients presenting with painful groin and lower extremity in order to improve survival by early recognition of an underlying intraabdominal inflammatory pathology.

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