Turkish Journal of Geriatrics
2014; 17 (1) 95-98

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Kıvılcım UPRAK
Şevket Cumhur YEĞEN

Case Report

OBTURATOR HERNIA: A DIAGNOSTIC DILEMMA, REPORT OF A CASE

Abstract

Obturator hernia is a rare pelvic hernia that occurs in elderly, thin, multiparous women. Patients present with few nonspecific clinical symptoms to identify the cause, and the diagnosis is often delayed or missed. Physicians should maintain a high level of clinical suspicion for obturator hernia in elderly women as it is a diagnostic challenge in which the hernia mass is usually concealed beneath the pectineus muscle. Early diagnosis and prompt initiation of treatment reduces the risk of surgical complications and increases the chance of survival. Different imaging modalities including Ultrasound, herniography and CT have been proposed to assist with accurate diagnosis. Herein, we present a case of a 78 year-old woman with thigh pain secondary to an obturator hernia and magnetic resonance imaging confirmed the diagnosis.

Key Words: Hernia; Obturator; Pain; Magnetic Resonance Imaging.

Olgu Sunumu

OBTURATOR HERNİ: TANISAL İKİLEM, BİR OLGU SUNUMU

Öz

Obturator herni yaşlı, zayıf ve multipar kadınlarda görülen nadir bir pelvik herni türüdür. Hastalar nonspesik klinik bulgular taşımaktadırlar ve tanıda genellikle gecikmeler ya da hatalar yaşanmaktadır. Bu hernilerin tanısal zorluğu, fıtık kesesinin pektineus kası tarafından gizlenmesinden kaynaklanmaktadır; hekimler yaşlı kadın hastalarda ayırıcı tanıda obturator herniyi akılda tutmalıdır. Erken tanı ve müdahale ile cerrahi komplikasyon riski azaltılabilir ve sürvi şansı artırılabilir. Fizik muayeneye ek olarak, ultrason, herniografi ve de Bilgisayarlı Tomografi gibi radyolojik tetkikler tanıda yardımcı incelemeler olarak öne sürülmüştür. Bu makalede 78 yaşında obturator herniye bağlı uyluk ağrısı ile başvuran bir olgu sunulmaktadır. Bu vakada manyetik rezonans görüntüleme ile tanı doğrulanmıştır.

Anahtar Sözcükler: Obturator Herni; Ağrı; Magnetic Resonans Görüntüleme.

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Geliş Tarihi: 15/06/2013
(Received)

Kabul Tarihi: 19/07/2013
(Accepted)

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Introduction

Obturator hernia is a rare type of hernia that accounts for only 0.07% to 1.4% of all intra-abdominal hernias (1). The diagnosis of obturator hernia is difficult because symptoms are usually vague and the hernia is rarely detected on physical examination. The physical findings are mostly nonspecific. Chronic thigh pain in elderly patients with rheumatoid arthritis causes a delay in diagnosis. Misdiagnosis of obturator hernia complicated with intestinal strangulation can be fatal (2). The need for awareness of this condition is stressed, especially in thin, elderly females with small bowel obstruction and no previous abdominal surgery. We report a case of obturator hernia in which the clinical diagnosis was difficult and magnetic resonance imaging (MRI) confirmed the diagnosis.

Case

A 78-year-old thin, debilitated female (weight=43 kg, BMI= 21.9 kg/m^2) was referred to the emergency unit from a private clinic with pain and swelling in the anterior surface of the left thigh. She had no past history of any abdominal operations. She had rheumatoid arthritis and had been taking different medications including NSAIDs and immunosuppressant drugs for 10 years. Her radiological evaluation with USG showed a 6x10 cm cystic mass in the left femoral region. Abdominal X Ray in the supine position showed no signs of obstruction or perforation. With a prediagnosis of soft tissue mass, MRI was done in that clinic.

On admission to our emergency unit, physical examination revealed a body temperature of 37.4°C with mild tachycardia. The complete blood count showed a white blood count of 8500/µL, hemoglobin of 10.5 g/dL, and a platelet count of 235.000/µL. She also had mild prerenal azotemia. Bowel sounds were feeble and the abdomen was soft without distention. Rebound tenderness and muscle guarding were not present. A mass and erythema were observed on the medial surface of the left thigh. MRI was reinterpreted and an obturator hernia containing omentum was observed (Figures 1-3). Surgery was performed via an obturator approach. Incarcerated omentum was reduced. The defect was repaired with purse-string sutures without a mesh patch.

Discussion

An obturator hernia is defined as a hernia that passes through the obturator canal. It is most frequently seen in

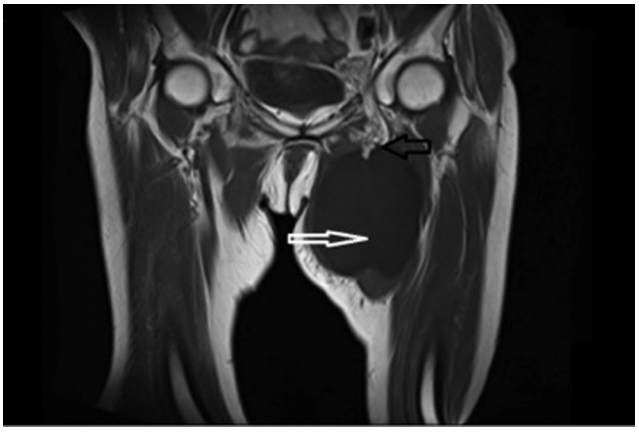

Figure 1— Coronal T1-weighted MR image: Herniation of the omental fat (black arrow) through the left obturator canal. Fluid collection loculated distal to the herniated tissue (white arrow).

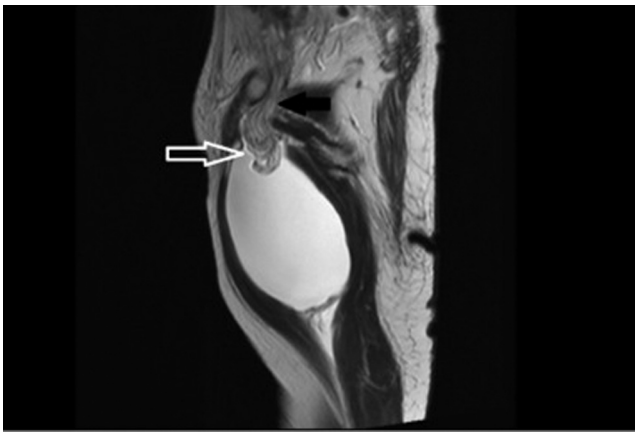

Figure 2— Sagittal T1-weighted MR image: Omental fat (white arrow) is seen in the left obturator canal (black arrow).

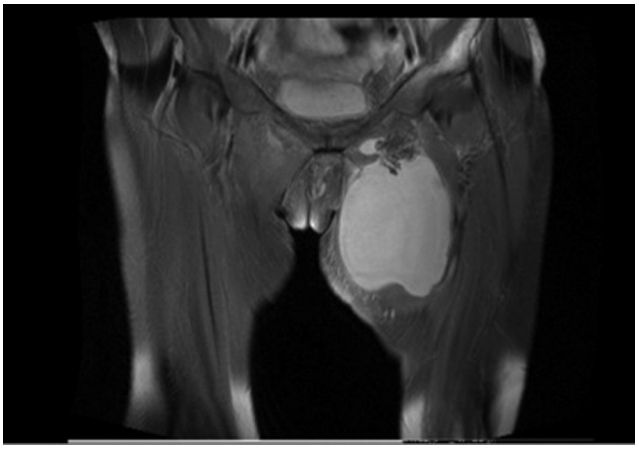

Figure 3— Coronal fat saturated T2-weighted MR image.

emaciated elderly women, at a mean age of 80, as a result of loss of protective fat in the obturator canal and larger triangular canal opening with a greater transverse diameter (3). Female-to-male ratio is 6:1 and bilaterality accounts for 6% of the cases (4).The obturator canal is bounded above by the superior pubic ramus and below by the sharp free upper edge of the obturator membrane. It is 3 cm long and runs obliquely, forward, downward, and medially. It contains the obturator vessels and nerves. The formation of these hernias is thought to begin with a "pilot tag" of pre-peritoneal fat followed by the appearance of a peritoneal dimple that ultimately grows into a larger hernia sac that may contain small bowel, large bowel, omentum, fallopian tube, or appendix. The frequency of pilot tags in cadavers and the rarity of actual obturator hernias suggest that most obturator hernias do not progress beyond the early stages of development (5). Gray et al. described a useful staging system: In the first stage only a small plug of pre-peritoneal fat enters the orifice of the obturator canal. Peritoneum herniates through the obturator canal forming a hernia sac in the second stage. In the third stage viscera enters the sac (6). Herniation is more common on the right side; the sigmoid colon may cover the left obturator foramen and prevents herniation (7).

There are 4 cardinal features of obturator hernia: 1) intestinal obstruction is the most common presentation in 88% of patients; 2) Howship-Romberg sign is found in 50% of patients. It is ipsilateral pain along the inner thigh that is exacerbated by extension, adduction, or medial rotation of the hip and relieved by flexion; 3) a history of repeated attacks of intestinal obstruction in 30% of patients that relieve spontaneously; and 4) a palpable mass high in the medial aspect of thigh (as seen in our case) (8).

Open surgical treatment includes abdominal, retropubic, obturator, and inguinal approaches (5). We performed an obturator approach through a generous incision above the palpable mass. The adductor longus muscle and pectineus muscle were drawn back to expose the sac. The strangulated omentum was reduced; the sac was divided and closed with a purse-string non-absorbable suture. The role of laparoscopy in emergency surgical cases has evolved recently. In the current climate of increasing familiarity with laparoscopic surgery, laparoscopy can be an option for treatment of obturator hernia cases (9).

Different imaging modalities including Ultrasound (USG), herniography and CT have been proposed to assist with accurate diagnosis. Conventional plain radiographs may show a gas shadow at the obturator foramen. This insensitive sign is only present in stage 3 hernias when the hernia sac contains bowel or when an abscess is present due to perforation. Ultrasound is often not accurate due to the deep location of the obturator canal, but in case of a strangulated hernia it can be useful and reliable (10). CT scan is the standard for evaluating both the obturator hernia and its complications (11, 12). Despite its multi-planar potential, the role of MRI is less clear, and certainly standard T1- and T2-weighted sequences are relatively time consuming compared with image acquisition in CT. Recently, rapid sequence fast imaging in steady state precession (true-FISP) MRI has been proposed to be useful in diagnosis of recurrent inguinal hernias; true-FISP MRI can provide anatomical detail in 30 seconds in a single breath hold (13). In our case, the patient was referred with MRI images that demonstrated the presence of a hernia sac in the obturator canal without the involvement of an intestinal segment. Even in centers with excessive sources, MRI is not a recommended modality in the management of obturator hernia. However, it may be helpful in differential diagnosis of cases with obscure clinical signs.

In conclusion, obturator hernia is a rare but significant cause of morbidity in elderly patients with unexplained non-traumatic hip or thigh pain. Physical examination provides diagnostic clues; prompt diagnosis and management are essential to reduce subsequent mortality.

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