Hip pain in an elderly man: beware the obturator hernia

Introduction

An obturator hernia is a rare pelvic hernia and usually occurs in elderly, thin, multiparous women. Wang et al (2007) confirmed that diagnosis is often difficult and can be delayed until laparotomy. Pain in the thigh or knee can be misinterpreted especially in a patient with previous hip surgery on the affected side as discussed by Gaunt et al (1992). This article describes a patient who presented on several occasions with left hip pain eventually presenting with small bowel obstruction. This resulted in a computed tomography-proven diagnosis of obturator hernia.

Discussion

Obturator herniae are rare. They were first described by de Ronsil in 1724 and the first successful repair was described in 1851 by Orbe. Approximately 600 cases have been reported in the English literature representing 0.05–0.4% of all hernias and 0.2–1.6% of all episodes of mechanical intestinal obstruction (Guillem et al, 2000), with the highest rates seen in Asian populations (Lo et al, 1994). These hernias most commonly occur in thin, elderly patients. Women tend to be affected as a result of pregnancy-induced relaxation of the pelvic peritoneum as well as the larger and more oblique obturator canal (Guillem et al, 2000).

This case is rare being in a male and on the left, the less common side, involving mid ileum – most reports are of terminal ileal involvement on the right. The presence of the sigmoid colon may act as a barrier, reducing the incidence of left obturator herniae. Gray et al (1974) reported three stages of obturator hernia formation: entrance of peritoneal fat into the pelvic orifice of the obturator canal in the pre-hernial stage, the developmental stage as a peritoneal dimple forms leading to a peritoneal sac and the symptomatic stage when viscera herniate into the sac.

Diagnosis is difficult because of the occult nature of the condition, non-specific signs and symptoms, and the inaccessibility of the hernia in the pelvis. Strangulated obturator hernias are rarely diagnosed preoperatively. The hernia is exceptionally felt on clinical examination as a swelling in the femoral triangle, but is often overlooked as it is covered by pectineus muscle. It can occasionally be palpated on rectal or vaginal examination. Usually it presents as a combination of hip pain (caused by pressure of the sac on the obturator nerve in the obturator canal) and intestinal obstruction. In this case, the pain radiated down the medial aspect of the thigh to the knee during extension and abduction of the hip, giving a positive Howship–Rhomberg sign. This is shown in only 15–50% of cases. As in this case the pain can be erroneously attributed to osteoporosis, arthritis or trauma. Another test for the hernia is the Haddington-Kiff sign – absence of the adductor reflex (contraction of the adductors when the tendon of adductor magnus is tapped while the thigh is abducted) in the affected thigh with a normal patellar reflex on the ipsilateral side (Hannington-Kiff, 1980).

Abdominal computed tomography is helpful in diagnosis of these herniae, often showing a soft tissue mass of incarcerated bowel between the obturator externus and pectineus muscle. Computed tomography was first used for diagnosis of an obturator hernia in 1983 and has up to 90–100% accuracy in some series (Losanoff et al, 2002; Mantoo et al, 2009) (*Figure 1*). The potential delay caused by confirming a diagnosis has led some to advocate exploratory laparotomy to make the diagnosis, but Yau et al (2005) reported laparoscopic surgery being successfully used for diagnosis and treatment. In the case it was felt that the small bowel was too significantly distended to facilitate laparoscopy. If there is small bowel obstruction in the absence of previous abdominal surgery it would be reasonable to

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Case Report

A 81-year-old man presented with a 24-hour history of progressive arthralgia in the left hip. Past medical history included bilateral inguinal hernia repair, bilateral total hip replacement, laparoscopic cholecystectomy and cardiac pacemaker insertion. On presentation, the patient's abdomen was soft and non-tender to palpation. There was mild tenderness over the anterior aspect of the left hip with restriction of movement and pain in all directions. Blood count and serum biochemistry were normal. Advised treatment was rest and analgesia and the patient was discharged. The following day he presented to his GP who prescribed some analgesia and discharged him.

The patient presented, 48 hours later, to a referring accident and emergency department with abdominal pain and distension, vomiting and absolute constipation. The patient was most comfortable lying supine with both hips flexed. An abdominal radiograph showed dilated small bowel loops with multiple air fluid levels in keeping with small bowel obstruction.

On assessment by the surgical team, the patient was found to be tender in the left iliac fossa with no palpable hernia in either groin. Given the small bowel obstruction and arthralgia a Howship–Rhomberg test was evaluated, which was positive. This test for obturator herniae is positive when pain extends down the medial aspect of the thigh with abduction, extension or internal rotation of the hip. He had a computed tomography scan which confirmed the presence of small bowel obstruction with a transition point in the left obturator region, but bilateral hip replacements made the scans difficult to interpret. Given the absence of palpable hernia on clinical examination it was felt that this presentation was an obturator hernia.

The patient proceeded to laparotomy through a lower vertical midline incision where a 2 cm Richter's type hernia was found in the left obturator canal. A 10 cm loop of small bowel was resected to remove the gangrenous segment, followed by a primary anastomosis. The obturator defect was repaired with interrupted sutures. The postoperative course was uneventful.

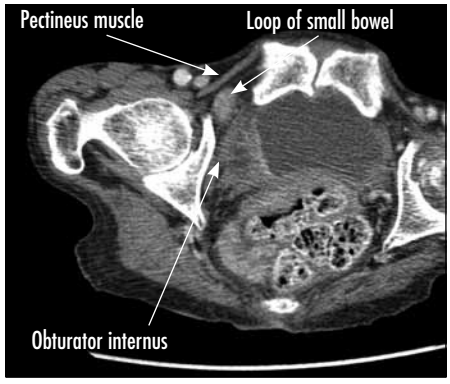

Figure 1. A computed tomography scan showing an obturator hernia on the right side labelled for trapped small bowel, pectineus muscle and obturator internus.

proceed straight to laparotomy, but it was not in this case given the previous surgery.

Guillem et al (2000) showed that small bowel resection is necessary in 25–80% of cases; morbidity can be as high as 38% with mortality around 10–20% possibly reflecting delay in presentation or diagnosis. There is no consensus on the most appropriate way to close the defect – direct suturing, mesh repair at laparotomy, patching with adjacent structures and laparoscopic transabdominal or preperitoneal mesh repair have all been advocated (Losanoff et al, 2002). In this case simple closure was performed as it was felt that peritoneal cavity contamination precluded the use of prosthetic material. This has an acceptable recurrence rate of 10%.

Conclusions

This case emphasizes the need to consider rare causes of intestinal obstruction. Recurrent presentation in elderly patients should heighten awareness. Timely access to optimal imaging is an advantage, but adherence to clinical management and decision making principles is still paramount. BJHM

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LEARNING POINTS

- Obturator herniae are rare but can cause significant morbidity and mortality.
- Repeat presentation of hip pain should raise clinical suspicion.
- A computed tomography scan is the best imaging if an obturator hernia is suspected.

Orbital involvement in multiple myeloma

A 69-year-old woman undergoing chemotherapy for multiple myeloma presented to accident and emergency with a 3-week history of swollen lids and blurred vision in her left eye. Detailed ophthalmic examination revealed non-axial proptosis and limited gaze elevation. Magnetic resonance imaging showed a 3.3 cm x 2 cm dumbbell-shaped enhancing soft tissue mass superior to the left globe with a similar lesion present in the left occipital bone (*Figures 1* and *2*) secondary to multiple myeloma. She was given a prompt course of oral dexamethasone and radiotherapy with complete resolution of the orbital mass.

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Orbital involvement of multiple myeloma is rare and can present as plasmacytoma, primary or solitary extramedullary plasmacytoma, or necrobiotic xanthogranuloma. Proptosis is the major presenting sign with predilection for the superotemporal quadrant of the orbit (Burkat et al, 2009). Prompt treatment with steroids and radiotherapy can lead to complete resolution. BJHM

Burkat CN, Van Buren JJ, Lucarelli MJ (2009) Characteristics of orbital multiple myeloma: a case report and literature review. *Surv Ophthalmol* **54**(6): 697–704

Figure 1. T2-weighted magnetic resonance imaging showing dumbbell-shaped mass superior to left globe.

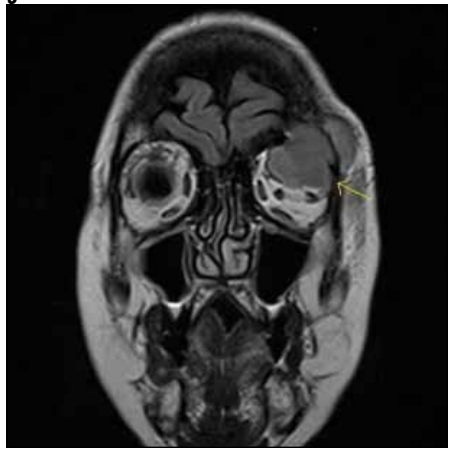

Figure 2. T1-weighted magnetic resonance imaging with gadolinium: mass demonstrating enhancement.