Obturator Hernia : An Elusive Diagnosis

Maj D Routh*, Lt Col V Kumar⁺, Lt Col KJ Singh[#], Col SN Mohanty**

MJAFI 2008; 64 : 284-285

Key Words : Obturator hernia

Introduction

We present an unusual case of an elderly female patient with acute onset upper abdominal pain associated with nausea and vomiting due to an obstructed obturator hernia. The absence of characteristic clinical signs in this thin elderly woman with a small bowel obstruction failed to provide a pre-operative diagnosis. The high mortality rate associated with this uncommon and most lethal of all abdominal hernias requires a high index of suspicion to facilitate rapid diagnosis and surgical intervention if the survival rate is to be improved.

Case Report

A 68 years old lady presented to this tertiary care hospital of Armed Forces with repeated episodes of bilious vomiting associated with colicky pain abdomen of 10 days duration and obstipation of four days duration. There was history of abdominal distension which got relieved after vomiting. She was an old case of infiltrating moderately differentiated carcinoma cervix treated eight years back with chemotherapy and radiotherapy. Her vitals were stable, abdomen was distended centrally with no evidence of peritonitis or free fluid. Per rectal and per vaginal examination did not reveal any sign of recurrence. Her biochemical parameters were within normal limits. Radiograph of the abdomen showed multiple air fluid levels. Ultrasound study of abdomen revealed multiple distended small bowel loops with sluggish peristalsis and minimal free fluid in the peritoneal cavity. Barium meal follow through showed multiple proximal jejunal loops with sudden cut off and crowding in the pelvis (Fig. 1). In view of her past history of treated Carcinoma Cervix and bowel loops stuck in the pelvis on radiology, a diagnosis of intestinal obstruction possibly due to radiation induced adhesions was made. Individual was taken up for an exploratory laparotomy on the 4th day of admission after a trial of conservative management. Per operatively, surprisingly there were no adhesions in the abdomen/pelvic cavity. A mid jejunal segment was found to be herniated in the left obturator

canal with gross dilatation of the proximal segment (Fig. 2). However, there was no evidence of gangrene. The contents were reduced, the defect was closed with a prolene mesh plug and peritoneum was closed over it. Post operative recovery was uneventful and individual was discharged on the 10th post operative day.

Discussion

Obturator hernia was initially described by Arnaud de Ronsil in 1724 and was first successfully repaired in 1851 by Henry Obre [1]. It is an uncommon problem that occurs predominantly in elderly, debilitated women. Incidence rates vary widely throughout the world but range from 0.073 - 1.0% of all hernias and 0.2 - 1.6% of all cases of mechanical obstruction [2]. The hernia proceeds through the obturator foramen situated bilaterally in the anterolateral pelvic wall, inferior to the acetabulum [3]. The obturator nerves and vessels pass through this tunnel, protected by extraperitoneal connective tissue and fat. Emaciation and advanced age cause the loss of this tissue as evidenced by most patients being in their seventh and eighth decades [2]. Women are affected at least six times more commonly than men, presumably because of a wider pelvis and larger, more triangular obturator canal [2]. Though the right side is more commonly involved with a ratio of 3:1, our patient presented with a left sided hernia.

Symptoms of bowel obstruction, including dull, cramping abdominal pain, nausea, and vomiting are reported in more than 80% of patients with obturator hernia [4]. Compression of the obturator nerve by the hernial sac produces the pathognomonic Howship-Romberg sign in 12.5 - 65.0% of patients [4]. This referred pain is relieved by flexion of the thigh and exacerbated by abduction, extension, and medial rotation. The loss of adductor reflex due to compression of the obturator nerve has been termed as Hannington-

*Assistant Professor, [#]Associate Professor, Department of Surgery, AFMC, Pune, 411040. ⁺Classified Specialist (Surgery & GI Surgery), Command Hospital (WC), Chandimandir. ^{**}Senior Advisor (Anaesthesiology & Paediatric Anaesthesiologist), Army Hospital R&R, New Delhi.

Fig. 1 : BMFT showing three feet of dilated proximal jejunum crowded in the pelvis.

Kiff sign [4]. These signs are often absent as in our case or overlooked because of low index of suspicion. A palpable inguinal mass is a rare finding on inspection of the proximal medial aspect of the thigh because of the pectineal muscle and presence of a tender mass on rectal or pelvic examination in the region of the obturator foramen may aid in diagnosis [4].

Abdominal radiography is most often nonspecific showing features of bowel obstruction as seen in our case. Occasionally intraluminal air bubbles in close proximity to the superior ramus of the pubic bone or gas shadows in the obturator foramen area may be diagnostic [5]. Recent series have obtained a 75-100% preoperative diagnosis by using ultrasonography and computed tomography [5]. Delay in diagnosis or operative intervention contributes substantially to morbidity and mortality [6]. Patients without gangrenous small intestine at surgery have a shorter preoperative hospitalization stay (2.6 days) and a better outcome since only reduction is required [6].

The intra-abdominal approach through a low midline incision is most commonly used as it can establish the diagnosis, avoid the obturator vessels, expose the obturator ring, and facilitate bowel resection if necessary [7]. Preperitoneal or laparoscopic approaches are favored if diagnosis is made preoperatively which is rarely the case [8]. Closure of the defect may be

Fig. 2 : Intra operative picture showing herniated jejunal loops in the left obturator canal.

accomplished by multiple methods including plugging the canal with polypropylene (Marlex) mesh or teflon patch [7]. Occasionally, the local tissue is relatively immobile and requires a mesh closure, which was done in the above case. Contralateral obturator canal defects are rarely repaired due to low recurrence rate and additional time required [7]. To conclude obturator hernia remains an unusual but important diagnosis in elderly thin patients with intestinal obstruction.

Conflicts of Interest

None identified

References

1. Chang SS, Shan YS, Lin YJ, Tai YS, Lin PW. A review of obturator hernia and a proposed algorithm for its diagnosis and treatment. *World J Surg* 2005;29:450-4.
2. Thanapaisan C. Sixty-one cases of obturator hernia in Chiangrai Regional Hospital: retrospective study. *J Med Assoc Thai* 2006;89:2081-5.
3. Whiteside JL, Walters MD. Anatomy of the obturator region: relations to a trans-obturator sling. *Int Urogynecol J Pelvic Floor Dysfunct* 2004;15:223-6.
4. Shipkov CD, Uchikov AP, Griqoriadis E. The obturator hernia: difficult to diagnose, easy to repair. *Hernia* 2004;8:155-7.
5. Chin LW, Chou MC, Wang HP, Bell W. Ultrasonography diagnosis of occult obturator hernia presenting as intestinal obstruction in ED. *Am J Emerg Med* 2005;23:237-9.
6. Kammori M, Mafune K, Hirashima T, Kawahara M, Hashimoto M, et al. Forty-three cases of obturator hernia. *Am J Surg* 2004;187:549-52.
7. Nakayama T, Kobayashi S, Shiraishi K, Nishiumi T, Mori S, Isobe K, et al. Diagnosis and treatment of obturator hernia. *Keio J Med* 2002;51:129-32.
8. Shapiro K, Patel S, Choy C, Chaudry G, Khalil S, Ferzli G. Totally extraperitoneal repair of obturator hernia. *Surg Endosc* 2004;18:954-6.