

# “LITTLE OLD LADY’S HERNIA” SURGEONS CHALLENGE

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## ABSTRACT

An obturator hernia also known as “little old lady’s hernia”, is an uncommon entity leading to bowel obstruction usually in thin built elderly females and is often associated with serious comorbid conditions due to advanced age. It is hard to diagnose preoperatively however diagnosis can be confirmed by CT scan accurately if there is a high index of suspicion. Delay in diagnosis and delay in the institution of appropriate surgical treatment leads to high morbidity and mortality.

**KEYWORDS** Obturator hernia, small bowel obstruction, Howship Romberg sign

## HOW TO CITE THIS ARTICLE

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## Introduction

An obturator hernia nicknamed as “little old lady’s hernia”, and is usually seen in multiparous, elderly thin built women most probably due to a wider pelvis and enlarged obturator canal.[1,2] Obturator a hernia is an uncommon entity and a significant cause of small bowel obstruction. Frequent association with comorbid disease is common due to advanced age. Correct preoperative diagnosis is difficult and mostly delayed due to non-specific signs and symptoms. Preoperative diagnosis is difficult to establish however CT scan can diagnose it with accuracy when the surgeon has a high index of clinical suspicion of an obturator hernia. Outcome improves if timely diagnosis and prompt treatment initiated. An obturator hernia has the

highest mortality amongst abdominal wall hernias. We present a case of 80-year-old female with complicated left obturator hernia associated with left bundle branch block and severe anemia.

## Case Report

The octogenarian lady presented to the emergency department for absolute constipation, distention of the abdomen and colicky abdominal pain since ten days with radiation of pain to the left lower limb associated with multiple episodes of bilious vomiting. There was no previous history of surgery, diabetes mellitus, hypertension, and Obstetrics & Gynecological history was insignificant. On physical examination patient was poorly nourished with the weight of 38 kg, dehydrated and pulse rate was 116 per minute. On examination, the abdomen was distended with tenderness in the left iliac fossa with no guarding or rebound tenderness. Bowel sounds were exaggerated. Digital rectal examination and per vaginal examination did not reveal any abnormality. Laboratory investigations revealed severe anemia with hypokalemia. ECG of the patient was suggestive of left bundle branch block. Abdominal radiographs in standing and supine position showed multiple air fluid levels and dilated small bowel loops. CT scan of the abdomen was suggestive of obstructed obturator hernia on the left side with jejunal loops herniating through it. (Fig. 1)

Diagnosis of acute intestinal obstruction due to an obturator hernia on the left side was made and the patient was optimized and prepared for exploration. On laparotomy dilated jejunal loop 1.5 feet from duodenojejunal junction was herniating through a defect of approximately 2 x 1 cm in size in the obturator canal on the left side of the pelvis (Fig. 2a). The jejunal

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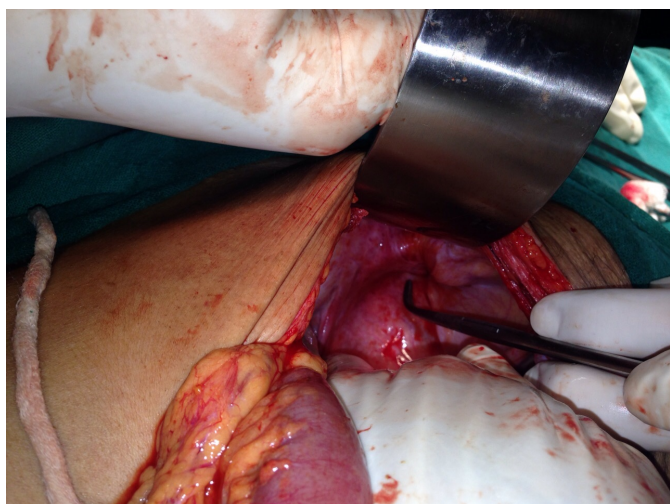
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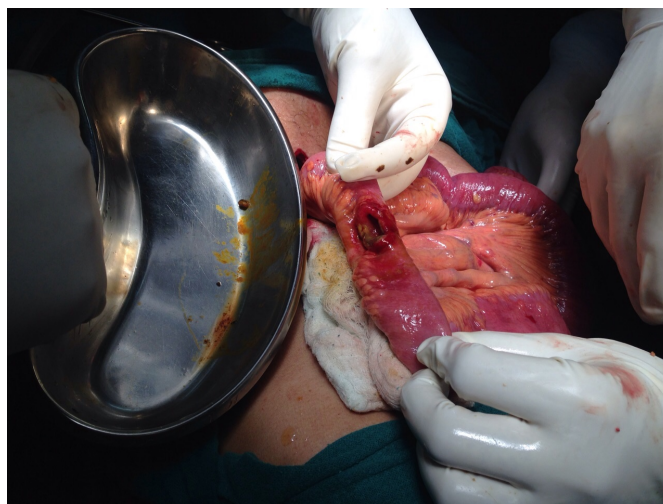
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**Figure 1:** CT image of obturator hernia.



**Figure 2a:** Intraoperative view of left obturator canal after reduction of jejunal loops.



**Figure 2b:** Jejunal Perforation.

loop was reduced manually having a gangrenous patch and perforation of 2 X 2 cm on the antimesenteric aspect without any contamination of the abdominal cavity (Fig. 2b). The defect closed with nonabsorbable sutures and perforation closed after refreshing the margins. The patient developed surgical site infection in the postoperative period which managed conservatively. The patient discharged on the 14<sup>th</sup> postoperative day.

## Discussion

First ever description of an obturator hernia was given in 1724 at the Royal Academy of Sciences in Paris by Arnaud de Ronsil and credit for first successful management goes to Henry Obrein in 1851 [1]. It is usually seen in patients between 70 to 90 years of age. Incidence of an obturator hernia is reported to be 0.073% - 1% of all the hernia with female preponderance and female to male ratio of 6:1 is seen.[3] Literature review of 270 years from 1724 to 1994 in the United Kingdom has revealed 600 cases and ten year study from 1993 to 2003 in Taiwan revealed only nine cases with 8:1 female to male ratio.[4] An obturator hernia is more prevalent on the right side as sigmoid colon tends to prevent it on the left side.

Obturator foramen is the largest bony foramen of the body covered by the obturator membrane and has an opening in its superior lateral aspect inferior to the pubic ramus, known as obturator canal. This obturator canal is bounded above and laterally by obturator groove of the pubis and inferiorly by the free edge of the obturator membrane and the internal and external obturator muscles. Obturator canal is one centimeter wide and two to three centimeter in length. Passing downwards and obliquely ending outside the pelvis in the obturator region of the thigh with external opening below the insertion of the pectoral muscle. The contents of the canal are obturator nerve, artery, and vein and filled with fat that prevents herniation of viscera or organs.[4,5]

Anatomically development of an obturator hernia divided into three stages. The first phase starts with 'pilot tags' of preperitoneal connective tissue and fat entering the pelvic or internal opening of the obturator canal. In second phase peritoneal dimple appears on the peritoneum progressing to the formation of the empty peritoneal sac. In third and final phase symptoms appear due to the entry of viscera into the peritoneal sac.[6] Diagnosis during the first two phases is uncommon.

Correct preoperative diagnosis is difficult and is mostly delayed due to non-specific signs and symptoms and made correctly only in 10-30% of cases.[7] Clinically 80% to 90% of the patients present with intestinal obstruction which may be partial due to high frequency of formation of Richter's hernia or complete.[3,8] In 10% of patients mass is palpable in the medial aspect of thigh at the origin of adductor muscle, which best palpated with thigh flexed, abducted and externally rotated or on lateral aspect on per vaginal examination.[9] Sometimes in cases of strangulation ecchymoses may appear in the upper middle thigh. Patients can present with recurrent episodes of pain. Pathognomonic Howship Romberg sign is seen in 15%-50% of patients, which is exacerbation of pain by adduction and medial rotation of thigh and is suggestive of incarcerated obturator hernia, due to compression of anterior division of obturator nerve.[6-9] Another more specific but less known sign is Hannington-Kiff sign, which is the absence of thigh adductor reflex. Percussion elicits this reflex over index finger placed across the adductor muscle approximately five centimeters above the knee joint.[10] Per rectal and per vaginal examination may reveal a tender palpable mass. Mortality rates of an obturator hernia are highest among abdominal wall hernias.[11].

Radiological investigations useful for obturator hernia diagnosis are herniography, plain and contrast abdominal radiography, ultrasonography, MRI but CT scan of abdomen and pelvis is most sensitive and accurate and should be done in elderly females with high index of suspicion of diagnosis.[12] Treatment of an obturator hernia is always surgical with approaches ranging from abdominal, inguinal, sublingual, retropubic (Cheatele-Henry), and laparoscopic.[7] In emergency most favorable approach is abdominal as bowel resection is expeditious, safe with proper exposure of obturator nerve and vessels and accurate diagnosis.[8] Small defects closed by simple sutures or adjacent structures, but larger defects require reinforcement with mesh. Laparoscopic approach may be beneficial for less pain and shorter hospital stay but is challenging, with longer learning curve and due to less number of cases experience with laparoscopic technique is lacking, moreover it is only favorable in cases of a non-strangulated hernia. The need of resection is a reflection of delay in diagnosis of an obturator hernia. Mortality ranges from 10% to 50% and increases with comorbid conditions and bowel gangrene.[3] Early preoperative diagnosis followed by immediate and proper surgical intervention helps to reduce associated morbidity and mortality.

## Conclusion

Although an obturator hernia is rare, the mortality is highest among all the abdominal wall hernias. It is hard to diagnose preoperatively and is usually present in elderly, multiparous and emaciated females with bowel obstruction associated with comorbid conditions. CT scan is helpful in a diagnosis only if one has a high index of suspicion clinically as in this case the hernia was on the left side it is rarest of the rare presentation of an obturator hernia. Early preoperative diagnosis followed by prompt surgical intervention helps to reduce associated morbidity and mortality. Although identified centuries ago little old lady's hernia still remains a diagnostic as well as a therapeutic challenge to the surgeons of the modern era.

### Competing Interests

The authors declare no conflict of interest.

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