Case Report

Obturator Hernia: An Unexpected Cause of Small Bowel Obstruction

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Obturator hernia is a rare hernia and mostly found in elderly emaciated women. Patients are mostly presented as abdominal pain from small bowel obstruction. Herein, we reported one case of obturator hernia in a patient who presented with dyspnea instead of abdominal pain.

Keywords: Dyspnea, Obturator hernia, Small bowel obstruction

J Med Assoc Thai 2020;103(Suppl.8): S134-6
Website: http://www.jmatonline.com

Obturator hernia is an abnormal peritoneal sac with intraperitoneal or extraperitoneal organs or tissues protruding through the obturator canal[1], an osteo-fibrous tunnel that courses from the pelvis to the proximal thigh. The foramen is created superiorly by the superior ramus, interiorly by inferior ramus and body of pubic bone and inferiorly by the ramus and body of ischium. Obturator hernia is always found in the elderly multiparous, emaciated women with increased intra-abdominal pressure[2], mean age, number of offspring and weight are 89 years, 4 children and 33 kg, respectively[3]. Hence it is nicknamed as the little old ladies hernia[4].

Since it was firstly reported in 1,724 in France[5,6], it has still been considered as a rare disease, it accounts for 0.07% to 1.0% of all hernias, and 0.2% to 1.6% of all cases of mechanical obstruction of the small bowel[3]. The most common presentation of obturator hernia is small bowel obstruction (90%), other classic signs include obturator neuralgia from nerve compression by the hernial sac or Howship-Romberg sign and the Hannington-Kiff sign[7].

In Thailand, obturator hernia was found in 66 cases (2.2%) from all 2,828 hernia patients in Chiang Rai. It appeared frequently more than usual possibly due to frequent smoking among females[8]. Herein we reported one case of obturator hernia diagnosed in an elderly Thai woman who presented with dyspnea, no abdominal pain despite the document of small bowel obstruction.

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How to cite this article:

Sanglutong L, Insiripong S. Obturator Hernia: An Unexpected Cause of Small Bowel Obstruction. J Med Assoc Thai 2020;103(Suppl.8): S134-6.

doi.org/10.35755/jmedassocthai.2020.S08.12157

Case Report

A 78-year-old Thai woman was carried to the emergency department due to progressive dyspnea and minimal dried cough for 3 days. The physical examination revealed the body weight 35 kg, temperature 37.8°C, mild tachypnea (respiratory rate 22 breaths/min), marked cachexia, loss of temporal fat pad, mild pallor, crepitation and rhonchi at right lung, soft abdomen without tenderness. She was provisionally diagnosed as having community acquired pneumonia and admitted for the initial treatment with bronchodilator and ceftriaxone that was later switched to ceftazidime to cover *P. aeruginosa* yielded from sputum culture.

She had many concurrent diseases including poorly-controlled asthma, hypertension, diabetic mellitus with diet control and she was bed-ridden due to the old cardiovascular disease. Ten years ago, she had right breast cancer treated with the modified radical mastectomy.

In the medical ward, the attending physician noticed her marked abdominal distension with possibly visible bowel loop dilatation and generalized mild tenderness. The acute abdomen series was promptly performed and revealed the classical step ladder pattern. Although the small bowel obstruction was highly suggested by the film, the patient did not have the clinical characteristics such as colicky pain, vomiting, to be consistent with it. Hence, the initial treatment was only nasogastric intubation for bowel decompression and abdominal signs were under observation. On the second day of admission, the acute abdomen series film did not show any improvement. The gastroenterologist was consulted for evaluation and looking for the cause of gut obstruction.

The investigations included: Hb 10.9 g/dL, WBC 9,300 cell/mm^3, platelets 503,000 /mm^3, MCV 71.1 fl, N 89.6%, L 9.6%, creatinine 0.34 g/dL, BUN 4.4 g/dL, Na 137 mEq/L, K 3.1 mEq/L Cl 96 mEq/L HCO_3 32.8 mEq/L, albumin 2.5 g/dL, lactate 1.3 mmol/L, TSH 0.873 IU/mL and T4 3.9 ug/dL. Sputum acid-fast bacillus and sputum gene expert for *Mycobacterium tuberculosis* were not detected.

Sputum culture revealed *P. aeruginosa*. Serology for influenza A, B and HIV were negative.

The computerized tomography(CT) of the abdomen showed diffusely markedly dilated with fluid filled proximal small bowel loop, an incarcerated right obturator hernia containing small bowel loops with high grade small bowel obstruction with small hernia sac located between the right pectineus and right obturator muscle as Figure 1 and Figure 2. The operative laparotomy was immediately performed and revealed clear ascites fluid 300 ml, marked distension of small bowel, strangulated right obturator hernia (2 cm gangrene wall of ileal segment with perforation). The hernia was reduced, 2 cm gangrene ileal segment was resected, side-to-side bowel anastomosis was done. The obturator hernia sac was repaired. The pathology of the resected ileum revealed the submucosal hemorrhage, necrotic ileum with perforation, no malignancy and no granuloma. After the operation, she was supported with parenteral nutrition. The post-operative complication was minimal, only lung atelectasis was found and completely corrected. She could be discharged home in 2 weeks.

Discussion

Although our patient had definite small bowel obstruction by the incarcerated obturator hernia, her clinical presentation did not remind the physicians at the emergency room to think of it. She did not give history of abdominal colicky pain, no vomiting, and no concern of constipation/obstipation and no increased bowel sound on the physical examination. Even though the upright abdomen film showed the step ladder pattern, it could not encourage surgeons to make the conclusion until the diagnosis of the small obstruction because of the obturator hernia was confirmed by the CT of the abdomen which mostly could make the diagnosis of obturator hernia in the elderly with high accuracy rate[9].

The diagnosis of obturator hernia is usually delayed until some patients have the bowel strangulated and need surgical resection[10,11] because it always emerges among the elderly who usually have multiple underlying diseases, especially malnutrition. The clinical manifestations could be disturbed by these factors. Besides malnutrition, our patient was bed-ridden for a year, communication was problematic, moreover, diabetes has been well known to cause the autonomic disturbance and subsequently gastrointestinal dysmotility[12], so did the aging itself, the immobility[13] and the cancer cachexia[14].

Except for the gastrointestinal dysmotility, other manifestations of obturator hernia do not look like inguinal hernia which can be easily seen, i.e. the hernia mass is always concealed beneath the pectineus muscle[15]. Furthermore, while the vast majority of obturator hernia present with signs and symptoms of small bowel obstruction[16], it may present with unusual manifestations such as thigh pain with hyperesthesia in the cutaneous segment of the obturator nerve[17] and knee pain[18].

The general recommended treatment for obturator hernia is the exploratory laparotomy for repairing the hernial sac. But currently the surgery via the endoscopy becomes more practical[19].

Figure 1. Shows incarcerated right obturator hernia containing small bowel loop with high grade small bowel obstruction.

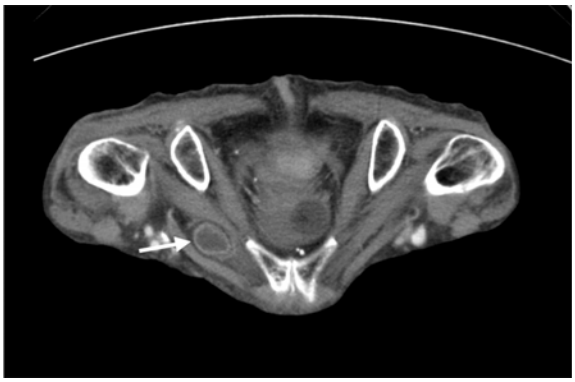

Figure 2. Small hernia sac (ileal loop, white arrow) at right groin locates between right pectineus and right obturator muscle.

Conclusion

A 78-years-old Thai woman had small bowel obstruction due to an obturator hernia. Her clinical presentations did not suggest small bowel obstruction that could be obviously detected by the upright film and the CT of the abdomen. The imaging seems much more reliable to make the diagnosis in this situation than the clinical presentations.

What is already known on this topic?

Obturator hernia is uncommon cause of small bowel obstruction.

What this study adds?

The abdominal distension without pain and vomiting in the elderly with multiple medical problems must not preclude the possibility of small bowel obstruction.

Besides knee pain and thigh pain, respiratory dyspnea can be one of unusual leading problems in obturator hernia.

Conflicts of interest

The authors declare no conflict of interest.

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ไส้เลื่อนอ็อบทูเรเตอร์: สาเหตุของภาวะลำไส้เล็กอุดกั้นที่คาดไม่ถึง

ลิขสิทธิ์ แสงลู่ทอง, สมชาย อินทรศิริพงษ์

ไส้เลื่อนอ็อบทูเรเตอร์เป็นไส้เลื่อนที่พบได้น้อยมาก ส่วนมากพบในผู้หญิงสูงวัยที่ผอมแห้งแรงน้อย ซึ่งอาการที่พบเกือบทั้งหมดคือปวดท้องจากการอุดกั้นของลำไส้เล็ก แต่ในที่นี้เป็นรายงานผู้ป่วยไส้เลื่อนอ็อบทูเรเตอร์ที่มาพบแพทย์ด้วยอาการหายใจลำบากแทนที่จะเป็นอาการปวดท้อง