Sixty-One Cases of Obturator Hernia in Chiangrai Regional Hospital: Retrospective Study

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Objective: *To review the patient characteristics and clinical symptoms, intraoperative finding and management, including morbidity and mortality rate of obturator hernia cases.*
Material and Method: *A retrospective study was performed in 61 patients diagnosed as obturator hernia at Chiangrai Regional Hospital between January 2000 and December 2005.*
Results: *The incidence of obturator hernia is 61 of 2,828 cases (2.2%) of all hernias, female:male 6.6:1. The mean age was 72.85 years. The mean body weight was 35.72 Kg. Howship-Romberg's sign were positive in eight patients (13.11%). Thirty-five patients (57.38%) were Richter type hernia, left:right side 3:2. Strangulation of bowel occurred in 41 patients (67.21%) Mortality rate was 11.47%. All patients with postoperative complications and all deaths showed bowel strangulation and all were more than 70 years of age.*
Conclusion: *In the present study, the authors found a high incidence of obturator hernia (2.2% of all hernias) compared with a previous report (0.05%-1.4% of all hernias). This high incident rate might relate to the specific local life style of people in Chiangrai as most patients had a habit of smoking. Chronic obstructive pulmonary disease (COPD), old age, and low body weight were possible contributing factors. Bowel strangulation and age more than 70 years old were associated with morbidity and mortality.*

Keywords: *Obturator hernia, Howship-Romberg's sign, Intestinal obstruction*

J Med Assoc Thai 2006; 89 (12): 2081-5
Full text. e-Journal: *http://www.medassocthai.org/journal*

Obturator hernia is a relatively rare pelvic hernia and usually occurs in elderly, thin, multiparous women[1]. It is a rare hernia with a higher chance of intestinal obstruction and strangulation, compared with inguinal hernia. In most patients with obturator hernia, emergency operation is performed for treatment of intestinal obstruction with or without a definitive preoperative diagnosis. It is difficult to diagnose preoperatively, and the diagnosis is usually made at laparotomy for intestinal obstruction or peritonitis[2]. Delay in diagnosis and surgical intervention directly contribute to high morbidity and mortality rates[3-5]. This rare hernia condition was first described by Arnaud de Ronsil in 1724 in Paris. The incidence of obturator hernia ranges from 0.05-1.4% of all hernias[6-8].

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In the present study, the authors present 61 cases of obturator hernia undergoing operation at Chiangrai Regional Hospital. The authors reviewed these cases and examined the patient characteristics, clinical symptoms, intraoperative findings and management, and morbidity and mortality.

Material and Method

All cases of obturator hernia treated at Chiangrai Regional Hospital from January 2000 to December 2005 were reviewed retrospectively in age, sex, body weight, duration of symptoms, previous abdominal surgery, clinical evidence of intestinal obstruction, Howship-Romberg sign, associated medical conditions, radiological investigations, preoperative diagnosis, intraoperative findings and management, hospital stay, morbidity and mortality.

Results

Sixty-one cases of obturator hernia were identified. There were 53 women (86.89%) and 8 men (13.11%). The patients ranged in age from 48-93 years (mean 72.85 years) with body weight between 24-68 Kg (mean 35.72 Kg). The time from the beginning of symptoms to presentation ranged from 6 hours - 10 days (mean 3.13 days). Four patients (6.55%) had a history of previous abdominal surgery.

Clinically, 40 patients (65.57%) presented with signs and symptoms of intestinal obstruction. Howship-Romberg's sign (thigh or groin pain on the affected side) were positive in eight patients (13.11%). Associated medical condition were chronic obstructive pulmonary disease (COPD)21 (34.43%), chronic renal failure (CRF) 11(18.03%), ischemic heart disease (IHD) 4 (6.56%), renal stones 2 (3.28%), lung cancer 1 (1.64%), prostatic hypertrophy 1 (1.64%) and neurogenic bladder 1(1.64%). The correct diagnosis was made preoperatively in 22 patients (36.07%). Thirty-one patients (50.82%) had a diagnosis of intestinal obstruction and eight patients (13.11%) had a diagnosis of peritonitis (Table 1).

Laparotomy was performed in all patients. Thirty-five patients (57.38%) were Richter-type hernia. Thirty-seven hernias (60.66%) were on the left side and 24 (39.34%) on the right. Fifty-eight hernias (95.08%) had ileum involvement, three (4.92%) had jejunum involvement and 41 (67.21%) had strangulation of a small bowel. Small bowel resection was performed in 40 patients (65.57%) and one patient was managed by debridement and repair. In 57 patients (93.44%) the defects were repaired by suture, 3 (4.92%) by adjacent tissues plug and 1 (1.64%) by prosthetic mesh (Table 2).

Hospital stay for all of the patients ranged from 2-22.84 days (mean 12.42 days). Postoperative complications were encountered in 8 patients (morbidity rate 13.11%) (Table 3).

There were postoperative deaths in 7 patients (mortality rate 11.48%) (Table 4).

Discussion

Obturator hernia is a relatively rare pelvic hernia and usually occurs in elderly, thin, multiparous women. Women are affected nine times more often than men because of their broader pelvis, larger obturator canal, and multiple pregnancies[9]. Obturator hernia is associated with multiple predisposing factors. In women, a wider pelvis and more triangular obturator canal opening with a greater transverse diameter may

Table 1. Patients characteristics and clinical symptoms

Detail	Number (%) (n = 61)
Gender Female	53 (86.89)
Male	8 (13.11)
Age (year)	48-93 (mean 72.85)
Body weight (Kg)	24-68 (mean 35.72)
	< 40 in 53 cases (86.89)
Duration of symptoms (day)	0.25-10 (mean 3.13)
Previous abdominal surgery	4 (6.56)
Clinical of bowel obstruction	40 (65.57)
Howship-Romberg's sign	8 (13.11)
Preoperative diagnosis	
- Obturator hernia	22 (36.07)
- Intestinal obstruction	31 (50.82)
- Peritonitis	8 (13.11)
Associated medical condition	
- COPD	21 (34.43)
- Chronic renal failure (CRF)	11 (18.03)
- Ischemic heart disease (IHD)	4 (6.56)
- Renal stones	2 (3.28)
- Lung cancer	1 (1.64)
- Prostatic hypertrophy	1 (1.64)
- Neurogenic bladder	1 (1.64)

Table 2. Intraoperative finding and management

Findings and Management		Number (%) (n = 61)
Richter hernia		35 (57.38)
Left:Right side		37:24 (3:2)
Part of small bowel	ileum	58 (95.08)
	jejunum	3 (4.92)
Strangulation		41 (67.21)
Bowel resection		40 (65.57)
Suture		1 (1.64)
Defect closure	suture	57 (93.44)
	tissue plug	3 (4.92)
	prosthetic mesh	1 (1.64)

Table 3. Postoperative complications

Complication	Number (%) (n = 61)
Wound evisceration	3 (4.92)
Pneumonia	2 (3.28)
Anastomosis leakage	1 (1.64)
Wound infection	1 (1.64)
Urinary tract infection	1 (1.64)
Total	8 (13.11)

Table 4. Postoperative mortality

Detail	Number (%) (n = 61)
Sepsis	5
Sepsis with congestive heart failure	1
Pneumonia with congestive heart failure	1
Total	7 (11.48%)

increase the risk for development of an obturator hernia. Obturator hernia occurs most frequently in emaciated patients between 70 and 90 years of age. The loss of protective preperitoneal fat and lymphatic tissue from aging or malnutrition makes a larger space around the vessels and nerve, facilitating the formation of a hernia. Some concomitant conditions (e.g., chronic constipation, COPD, ascites, kyphoscoliosis) and multiparity also predispose patients to herniation by increasing intraabdominal pressure and relaxing the peritoneum[10,11].

Howship-Romberg's sign refers to pain along the distribution of the obturator nerve caused by compression of the nerve by the hernial sac. It is known to be a pathognomonic sign of obturator hernia. Typically, this pain is exacerbated by extension and adduction or inward rotation of the thigh. It is said to be presented in 15% to 50% of cases[2,6,10,12]. In the present study, the authors found the Howship-Romberg sign's occasionally, in only in eight patients (13.11%). This low incidence possibly relates to incomplete history taking and physical examination, poor communication and previous leg pain.

In the present study, the authors found a high incidence of obturator hernia at 2.2% (61 cases of obturator hernias out of 2,828 cases of all hernias within 5 years) compared with the previous report of incidence of obturator hernia that ranges from 0.05-1.4% of all hernias. This high incidence relates to the specific local life style of people in Chiangrai. Most patients live in a cold temperature area and have many years of smoking as a local tradition. In the present study, there were 21 COPD (34.43%) and one lung cancer (1.64%). Chronic cough, old age, and low body weight should be possible contributing factors of obturator hernia.

All patients came to hospital with acute abdomen. Plain abdominal radiographs were performed in all cases. The small bowel dilatation was found in all patients that demonstrated partial or complete small bowel obstruction. There were three patients with pneumoperitoneum that displayed bowel perforation. Additional ultrasonography was performed in four cases. All were found to have intraperitoneal fluid and dilatation of the small bowel.

From the review, preoperative diagnosis of obturator hernia ranged between 20-30%[13]. In the present study, preoperative diagnosis was made at the level of 36.06% (22 from 61 cases).

The authors found 35 cases (57.38%) of Richter type hernia and found left hernia more than right hernia. Thirty-seven hernias (60.66%) were on the left side and 24 (39.34%) on the right. From the review, the hernia usually contains ileum, although jejunum, colon, appendix, ovary, Fallopian tube, omentum, and bladder have been reported. Without repair, recurrence rates are 10% approximately[14]. In the present study, the authors found hernial content as small bowel in all cases with fifty-eight hernias (95.08%) had ileum involvement, only three (4.92%) had jejunum involvement and 41 (67.21%) had strangulation of small bowel. Small bowel resection was performed in 40 patients (65.57%) and one patient was managed by debridement and repair. In 57 patients (93.44%) the defects were repaired by suture, three (4.92%) by adjacent tissues plug and one (1.64%) by prosthetic mesh (Table 2).

Patients with strangulation have a duration of symptoms at 3.49 days by average, compared to all patients at 3.13 days. The patients with shortest duration of symptom (6 hours) also demonstrated strangulation.

The mortality was reported to be between 10% and 50%.They were all elderly, in the eighth decade or more[9]. Morbidity and mortality rates of the present study were 13.11 and 11.48%, respectively. All patients who had postoperative complication and deaths showed bowel strangulation and all were more than 70 years of age.

Conclusion

Although the incidence of obturator hernia in the general population is low, it is a significant cause of intestinal obstruction, particularly in emaciated elderly women. In Chiangrai, the incidence is very high compared with the prior reports. This is possibly because of the specific behavior of many-years continually smoking as a local custom that leads to chronic obstructive pulmonary disease (COPD). Old age and low body weight are the combination of possible contributing factors. Early diagnosis and surgical

intervention are essential to treat this rare entity properly.

Because of its nonspecific presentation, delays in diagnosis and treatment are frequent and are associated with increased postoperative morbidity and mortality. Obturator hernia should be suspected when an elderly, emaciated woman without a previous abdominal operation presents with symptoms of bowel obstruction or acute abdomen. In those cases presenting with complete bowel obstruction or peritonitis, an immediate laparotomy is indicated, even without a definite preoperative diagnosis.

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ไส้เลื่อน ชนิดออบตูเรเตอร์ 61 ราย ในโรงพยาบาลเชียงราย

ไชยเวช ธนไพศาล, ไชยยุทธ ธนไพศาล

วัตถุประสงค์: *เพื่อศึกษาผู้ป่วยโรคไส้เลื่อน ชนิดออบตูเรเตอร์ ในแง่ของลักษณะทั่วไปของผู้ป่วย อาการแสดง การตรวจพบในระหว่างผ่าตัดและการรักษา รวมทั้งอัตราการตายและการเกิดโรคแทรกซ้อน*

วัสดุและวิธีการ: *ศึกษาย้อนหลังในผู้ป่วย 61 ราย ที่ได้รับการวินิจฉัยเป็นไส้เลื่อน ชนิดออบตูเรเตอร์ ในโรงพยาบาลเชียงราย ระหว่างปี พ.ศ. 2543 ถึง พ.ศ. 2548*

ผลการศึกษา: *อุบัติการณ์พบได้ 61 รายในผู้ป่วยไส้เลื่อนทั้งหมด 2,828 ราย คิดเป็น เพศหญิง:เพศชาย 53:8 ราย (6.6:1) อายุเฉลี่ย 72.85 ปี น้ำหนักตัวเฉลี่ย 35.72 กิโลกรัม ผู้ป่วย 35 ราย (57.38%) เป็นไส้เลื่อน ชนิด Richter 37 ราย (60.66%) เกิดทางด้านซ้าย มีลำไส้เน่าตาย (strangulation) 41 ราย (67.21%) อัตราการเสียชีวิต 11.47% ผู้ป่วยที่มีโรคแทรกซ้อนและเสียชีวิตทุกรายมีลำไส้เน่าตายและอายุ มากกว่า 70 ปี*

สรุป: *อุบัติการณ์พบได้สูงกว่ารายงานก่อนหน้านี้ สาเหตุอาจสัมพันธ์กับวิถีชีวิตของประชาชนในจังหวัดเชียงราย ซึ่งชอบสูบบุหรี่ขี้โย การมีโรคปอดเรื้อรัง อายุมาก และน้ำหนักตัวน้อย การเกิดโรคแทรกซ้อนและการเสียชีวิตสัมพันธ์กับการมีลำไส้เน่าตายและอายุมากกว่า 70 ปี*