Surg Endosc (1996) 10: 437–438

Surgical Endoscopy

Laparoscopic repair of an incarcerated obturator hernia

T. L. Bryant, R. K. Umstot, Jr.

Marietta Memorial Hospital, 400 Matthew Street, Marietta, OH 45750, USA

Received: 5 May 1995/Accepted: 7 September 1995

Abstract. Obturator hernia is a rare cause of bowel obstruction. Occurring primarily in elderly women, it has a high incidence of incarceration and a high mortality rate. This report describes the successful laparoscopic reduction and repair of an incarcerated obturator hernia. Using open laparoroscopy, an incarcerated obturator hernia was diagnosed intraoperatively. After laparoscopic reduction, a transabdominal preperitoneal repair was completed using polypropylene mesh. The patient recovered uneventfully with no recurrence at 6 months. Laparoscopic techniques have been successfully applied to diagnose, reduce, and repair an incarcerated obturator hernia.

Key words: Laparoscopic repair — Hernia — Incarcerated obturator hernia

Obturator hernias account for as little as 0.073% of all hernias [1]. Patients presenting with this condition are typically elderly, multiparous, emaciated females with concurrent medical illnesses. Presentation is frequently delayed and accompanied by dehydration [2]. Physical examination and abdominal roentgenograms usually suggest a bowel obstruction. The Howship-Romberg sign is characterized by medical thigh and hip pain. Pain is exacerbated by adduction and medial rotation of the thigh and relieved by flexion. It is present in 15–50% of patients with obturator hernias and is felt to be pathognomonic [8]. Masses may be noted in the groin or during rectal or pelvic exam. Both CT scan and ultrasound have been used to confirm the diagnosis [7]. In many series, the majority of patients undergo operation for a small-bowel obstruction of unknown etiology, the correct diagnosis being made intraoperatively [8].

Numerous repairs have been described [5]. Simple hernia reduction has been associated with a recurrence rate of less than 10% [3]. Sac excision, suture closure of the anatomic defect, and prosthetic patch have all been associated with a low recurrence rate [4]. Historically, mortality has been reported to be higher than 70% [6]. Most deaths are related to preoperative morbidity.

Correspondence to: T. L. Bryant

Case report

A 77-year-old 61-kg female presented with a 3-day history of cramping abdominal pain, vomiting, and progressive distension. The patient suffered from chronic obstructive pulmonary disease, chronic bronchitis, and depression. She was ambulatory and living with one of her seven children prior to her acute illness. She had undergone no previous abdominal operations.

The abdomen was diffusely tender but free of peritoneal signs. No mass was present in the groin or on rectal exam. There was no complaint of thigh or hip pain. White blood was 10,100, BUN 37, and creatinine 1.5. Abdominal roentgenograms were read as showing distal small-bowel vs proximal colonic obstruction. The patient underwent nasogastric decompression and intravenous rehydration for 12 h in preparation for abdominal exploration.

Open laparoscopy was subsequently performed via umbilical incision. A 5-mm suprapubic port was placed to aid in bowel manipulation. It was noted that a segment of distended ileum was fixed in the medial right groin with a decompressed segment exiting. Two 10.5-mm ports were then placed symmetrically. Each was 2 cm inferior to the umbilicus and passed through the lateral rectus sheath.

Through each of these ports, an endoscopic Babcock clamp was placed. The two laparoscopic Babcock clamps were then used to apply gentle alternating traction to the segments of small bowel proximal and distal to the point of obstruction.

A knuckle of incarcerated distal ileum was thus reduced. The laparoscope was transferred to the left port and a Babcock clamp was transferred to the umbilical port. The reduced knuckle of small bowel was grasped and delivered through the open laparoscopy incision. Its viability was confirmed by direct inspection. This loop of ileum was tagged with an extracorporal suture for future identification before being returned to the abdomen. Had this loop of ileum been compromised, an extracorporeal resection could have been easily performed.

The hernia defect could now be clearly identified posterior and medial to Cooper's ligament. Additionally, a small indirect inguinal defect was present on the right. Transabdominal preperitoneal repair was performed. A transverse peritoneal incision was made from the umbilical ligament to a point superior and lateral to the internal ring. A peritoneal flap was developed. Both the indirect inguinal and obturator hernia sacs were completely reduced into the peritoneal cavity. The round ligament was divided between clips. Dissection was continued to reflect peritoneum 3 cm medial and posterior to the obturator defect.

A sheet of polypropylene mesh approximately 11 × 16 cm was then placed. The mesh extended 2 cm beyond the medial and posterior margins of the obturator defect. Laterally, it covered the floor of the inguinal canal, extending well beyond the internal ring. Staples were placed into Cooper's ligament, the pubic tubercle, and along the superior margin of the mesh. No staples were placed posterior or medial to Cooper's ligament.

The peritoneal defect was closed with staples. The previously incarcerated segment of small bowel was again inspected, both laparoscopically and directly. It remained clearly viable. The fascia and peritoneum of the lateral port sites were then closed using size 0 polyglycolic sutures and an Endo-close (United States Surgical Corporation). The umbilical fascia was also closed with 0 polyglycolic sutures. All skin incisions were closed with 3-0 poliglecaprone subcuticular sutures.

Postoperatively, the patient had an ileus until the 4th postoperative day. Her diet was subsequently advanced and she was discharged on the 7th postoperative day. Three months following discharge, she was successfully treated for *Haemophilus influenza* pneumonia. The patient is in stable condition and living with her family 6 months after her hernia repair.

Discussion

Many methods of repair have been described for obturator hernia. The fact that patients tend to be elderly, sedentary, and chronically ill contributes to the high mortality rate. The same demographic factors may also contribute to a low incidence of recurrence. As noted by Yip et al. [8], a transabdominal approach allows not only hernia repair, but identification and resection of any compromised intestine.

References

1. Bjork KJ, Mucha P Jr, Calull DR (1988) Obturator hernia. Surg Gynecol Obstet 167: 217–222
2. Chung YL, Lorentz TG, Law PWK (1994) Obturator hernia presenting as a small bowel obstruction. Am J Surg 167: 396–398
3. Gray SW, Skandalakis JE, Soria RE, Rowe JS Jr (1974) Strangulated obturator hernia. Surgery 75: 20–27
4. Hsu C, Wang CC, Jeng LB, Chen MF (1993) Obturator hernia: a report of eight cases. Am Surg (1993) 59: 709–711.
5. Larrieu AJ, De Marco SJ (1976) Obturator hernia: a report of a case and brief review of its status. Am Surg 42: 273–277
6. Singer R, Leary PM, Hofmeyr NG (1955) Obturator hernia. S African Med J 29: 73–75
7. Tsubono T, Fukuda M, Muto T (1993) A case of bilateral obturator hernias: image diagnosis and description of a retropubic operative approach. Surg Today Jpn J Surg 23: 159–163
8. Yip AWC, Ah Chong AK, Lam KH (1991) Obturator hernia: a continuing diagnostic challenge. Surgery 113: 266–269