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Case Report

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Laparoscopic Transabdominal Preperitoneal Repair for Recurrent Obturator Hernia: A Case Report

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Abstract

A 74-year-old female visited our hospital due to right lower abdominal discomfort. She underwent a computed tomography scan of the pelvis, and a soft tissue shadow was seen between the external obturator and pectineal muscles. On examination, she had a soft and flat abdomen and did not exhibit any signs of peritoneal irritation. The Howship-Romberg sign was present. She had never given birth, but had undergone a hernioplasty for a right-sided obturator hernia 13 years ago at another hospital. However, the details of the hernioplasty were not clear. She was diagnosed with a right-sided obturator hernia and underwent elective repair by laparoscopic Transabdominal Preperitoneal Repair (TAPP). At 12 postoperative months, the abdominal pain had not recurred. Obturator hernias are rare, and most cases are found as incarcerated hernias. It is rare to find an obturator hernia without intestinal obstruction. Herein, we report a case in which a recurrent obturator hernia was successfully treated with TAPP.

Keywords: HowShip-Romberg Sign; Obturator Hernia; TAPP

Introduction

Obturator hernias account for 0.07-1% of all hernias [1]. They tend to occur in elderly, emaciated, and multiparous females. Owing to their non-specific clinical symptoms, the diagnosis of obturator hernias is often delayed, and patients commonly present with acute intestinal obstruction. Delayed surgical intervention is associated with high mortality (mortality rate: 11-50%) [2,3]. However, abdominal Computed Tomography (CT) is useful for obtaining a definitive preoperative diagnosis, which enables surgical interventions to be performed, and hence, helps to reduce the incidence of complications, including those that require lower bowel resection, and the mortality rate [4,5]. Open surgery is the most common treatment for obturator hernias at many institutions. However, laparoscopic techniques are being used increasingly frequently. The use of laparoscopic techniques to treat obturator hernias was reported to be associated with less severe loss of function in the lower extremities, fewer postoperative complications, and a faster return to work than conventional surgery [6].

Case Report

A 74-year-old female (height: 144 cm, weight: 39 kg) visited our hospital due to right lower abdominal discomfort. She had never given birth, but had undergone a hernioplasty for a right-sided obturator hernia 13 years ago at other hospital. Her abdomen was soft and flat. The Howship-Romberg sign was observed. A CT scan of the pelvis showed a soft tissue shadow between the external obturator muscle and the pectineal muscle (Figure 1).

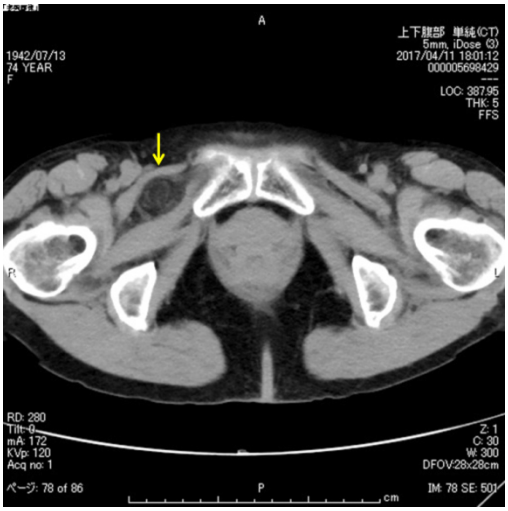

Figure 1: A CT scan oh the pelvis showed a soft tissue shadow between the external obturator muscle and the pectineal muscle.

There was no connection between the soft tissue shadow and the small intestine. No signs of ileus were observed. Based on the patient's CT and clinical findings, her pain was considered to have been caused by a right-sided obturator hernia. Since no intestinal obstruction was observed, elective laparoscopic Transabdominal Preperitoneal Repair (TAPP) was performed. A laparoscope was inserted via an umbilical port, and two working ports were created in the lower abdomen (Figure 2).

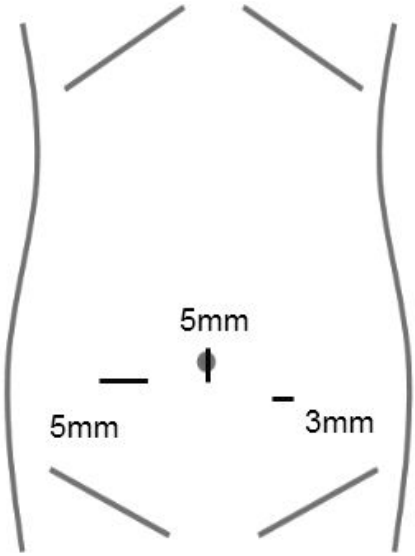

Figure 2: A laparoscope was inserted via an umbilical port, and two working ports were created in the bilateral lower abdomen.

A laparoscopic evaluation showed that the omentum had passed into the right obturator foramen (Figure 3).

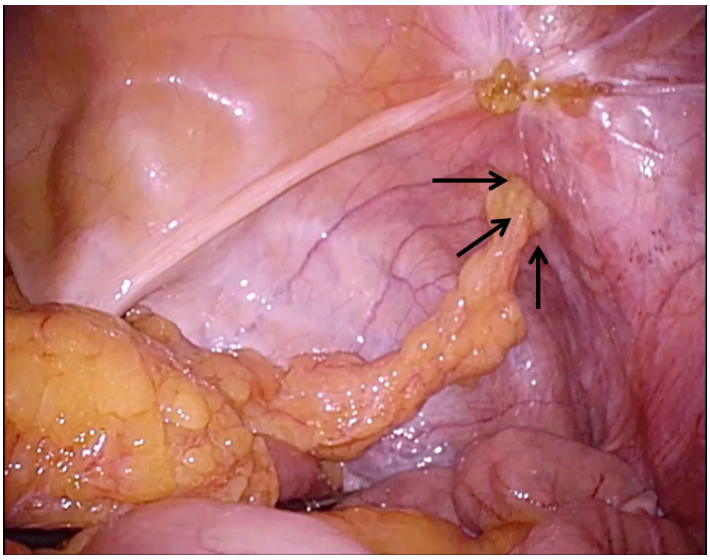

Figure 3: A laparoscopic evaluation showed that the omentum had passed into the right obturator foramen.

The arrow shows the obturator foramen.

The preperitoneal space was dissected around the obturator hernia (Figure 4a).

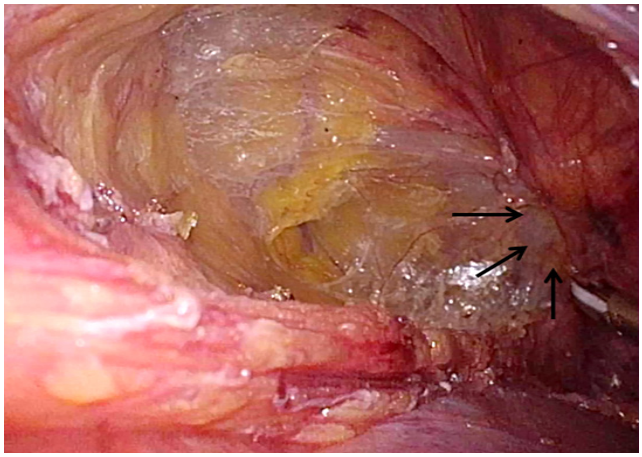

Figure 4a: The preperitoneal space was dissected around the obturator hernia. The arrows show the obturator foramen.

A large sheet of prosthetic mesh was placed in the preperitoneal area to cover the obturator foramen and femoral ring. The mesh was fixed with the three absorbable tacks at Cooper's ligament (Figure 4b).

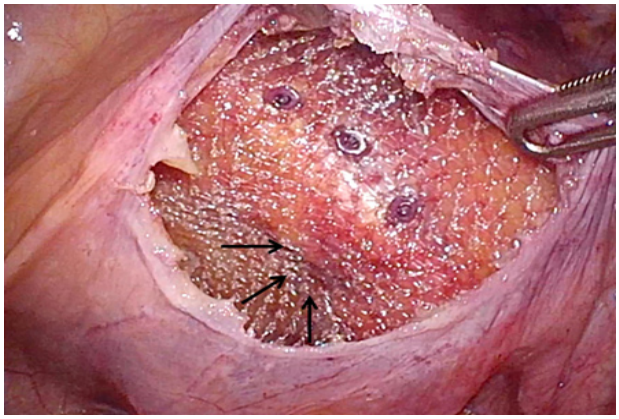

Figure 4b: A large sheet of prosthetic mesh was placed in the preperitoneal area to cover the obturator foramen and femoral ring. The mesh was fixed with the three absorbable tacks at Cooper's ligament. The arrows show the obturator foramen.

The patient's postoperative course was satisfactory. Twelve months have passed since the surgery without the abdominal pain recurring.

Discussion

Obturator hernias are most common in multiparous, emaciated, elderly women because such women have wider pelvises and larger obturator canals. Emaciation is an important risk factor for the condition because the loss of the peritoneal fat pad overlying the obturator canal increases the risk of herniation [3]. Comorbidities associated with increased intra-abdominal pressure, such as chronic constipation, chronic obstructive pulmonary disease, and kyphoscoliosis, can result in a predisposition to obturator hernias [7]. The usual clinical presentation of obturator hernias involves acute small-bowel obstruction with strangulation, frequently necessitating emergency bowel resection [8]. A palpable mass in the medial thigh is uncommon because obturator hernias are well concealed beneath the pectineus muscle, although herniated lesions are sometimes palpated during rectal or vaginal examinations. Obturator hernias occur less frequently on the left side because the sigmoid colon can cover the left obturator foramen, preventing herniation. About a third of patients suffer recurrent bowel obstruction followed by spontaneous remission [9]. There are many possible surgical approaches, including abdominal, preperitoneal, inguinal, and laparoscopic approaches, for repairing obturator hernias, although the optimal choice depends on the circumstances of individual cases [10]. Laparoscopic surgical procedures for inguinal hernias have been well established and reported [11,12], but their usefulness for treating obturator hernias remains unclear since these hernias often present in emergency situations. At many institutions, open surgery is still used to resect non-viable sections of the incarcerated bowel. However, laparoscopic surgery can be performed for obturator hernias, as well as inguinal hernias [13,14].

The preoperative diagnosis of obturator hernias is usually challenging since their clinical signs and symptoms are non-specific. The Howship-Romberg sign is only seen in 30-50% 13 of patients, and palpable masses are detected in <20% [15] of patients. Delays in surgical intervention can contribute to an increased need for intestinal resection and greater perioperative mortality [15]. CT exhibits high diagnostic accuracy (90%) for obturator hernias and is regarded as the most useful diagnostic tool in cases of suspected obturator hernias. 13 However, some studies have indicated that there is no benefit of using CT in such cases. 3 We suggest that CT scans should be performed in patients with abdominal pain without any obvious cause since it is difficult to diagnose obturator hernias without CT. In conclusion, TAPP repair seems to be a safe, feasible, and minimally invasive technique for emergency obturator hernia repair.

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