

Obturator hernia of the fallopian tube

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Abstract

Obturator hernia of the fallopian tube is extremely rare. Multidetector computed tomography of a 43-year-old nulliparous woman with sudden onset lower right abdominal pain showed a low-density mass in the right obturator canal suspected of being an obturator hernia of the uterine adnexa. She was diagnosed as having an incarcerated obturator hernia of the fallopian tube at operation and treated with prosthetic mesh. Obturator hernia of the fallopian tube is very rare, and all cases reported in the literature were localized on the right side, perhaps due to the lesser mobility of the left than the right fallopian tube.

Key words: Obturator hernia—Fallopian tubes—Adnexa uteri—MDCT

Obturator hernia is a relatively rare disease, and it is commonly found in elderly, emaciated, multiparous woman. The hernia usually contains small intestine but can include large bowel, omentum, appendix, and uterine adnexa [1].

A case of incarcerated obturator hernia of the fallopian tube in a woman with an atypical patient background, who was diagnosed preoperatively by multidetector computed tomography (MDCT), is reported.

Case report

A 43-year-old woman came to the ER because of sudden onset, right lower abdominal pain. She was nulliparous, with no history of abdominal surgery. She was 169 cm tall and weighed 59 kg, with a body mass index of 20.6 kg/m². She had tenderness to palpation in the right inguinal region with no palpable mass. The Howship–Romberg sign was negative. Contrast-enhanced MDCT of the abdomen and pelvis showed a low-density mass

between the fasciculi of the external obturator muscle on the right side. The mass was connected with the uterus, and the preoperative diagnosis was incarcerated obturator hernia of the uterine adnexa (Fig. 1). Surgery was performed under spinal anesthesia. An incision was made in the right groin, and the inguinal canal was opened with the anterior approach as for a hernioplasty of an inguinal hernia. The posterior wall of the inguinal canal and peritoneum were dissected. The right ovary was identified in the abdominal cavity. The preperitoneal cavity was dissected bluntly, and the obturator nerve and vessels were identified. The hernial sac was incarcerated into the obturator canal. The sac and the fallopian tube within it were reduced manually (Fig. 2). Part of the mesosalpinx contained hematoma, but there was no indication for resection. The peritoneum was sutured, and an M-size Bard Modified Kugel Patch (Davol Inc., Cranston, RI, USA) was used to repair the obturator hernia. The patient was discharged on postoperative day 3, and no recurrence was seen at 1-year follow-up.

Discussion

On CT examination of obturator hernia, a mass between the external obturator muscle and the pectineal muscle, or a mass between the superior and middle fasciculi of the external obturator muscle can be seen. The hernia usually contains small intestine, but other structures are also occasionally found. In the present case, the continuity of the hernia content with the uterus led to the proper preoperative diagnosis. Torsion of the incarcerated uterine adnexa was also suspected because it resembled the “whirl sign” in small bowel volvulus (Fig. 1A). MDCT was thus useful in decision-making for prompt surgery.

Obturator hernia is usually found in thin, elderly, multiparous females, although atypical cases such as the present case are reported infrequently as well. The wider and more obliquely inclined female pelvis with loss of the connective and fatty tissue due to aging and multiple pregnancies with chronic relaxation of the pelvic structures may predispose to this rare disease [2, 3].



Fig. 1. Coronal CT images of a 43-year-old female with right obturator hernia of the fallopian tube. The right uterine adnexa enters the obturator canal and consists of a heterogeneous mass cranial to the pectineus and adductor longus muscles (arrows).

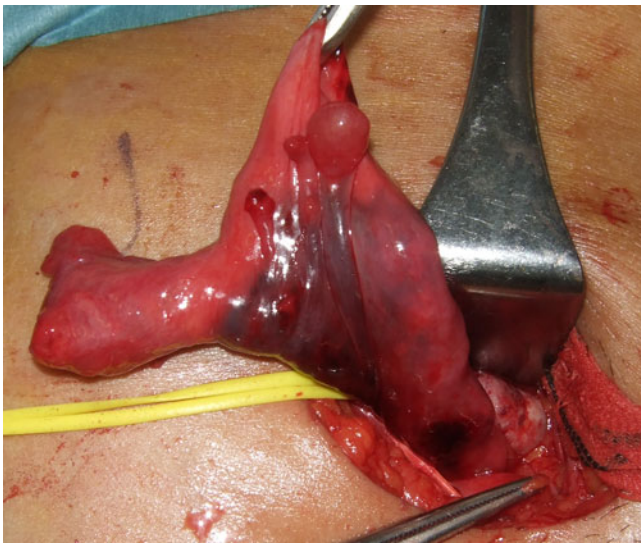


Fig. 2. The incarcerated right fallopian tube was reduced manually during the operation. Part of the mesosalpinx contained hematoma, but resection was not indicated.

Yokoyama et al. [4] reported that more than 80 % of obturator hernias affect the right side, and they also suggested that the sigmoid colon may cover the left obturator foramen, thus preventing herniation.

From January 1979 to April 2012, 65 patients with new-onset obturator hernia underwent surgery at our

institution. In these 65 patients, the hernia contained small intestine alone in 62 patients, both ovary and ileum in two patients, and fallopian tube alone in one patient. Herniation of the uterine adnexa was seen in three cases (4.6 %) in our institution, and they were all located on the right side. Eleven cases of obturator hernia containing uterine adnexa have been reported in the English and Japanese literature [1, 5–12]. Of the 11 cases, two had no description of laterality, and the remaining nine cases had an obturator hernia on the right side. This extreme bias may be explained by the lesser mobility of the left than the right uterine adnexa because of adhesion to the pelvic floor owing to the fusion fascia of the sigmoid mesocolon.

Conclusion

A case of obturator hernia of the fallopian tube was diagnosed preoperatively using MDCT. All the cases of this rare disease reported in the literature were localized on the right side.

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