

Imaging diagnosis

Case 409

4. Broad ligament hernia

【Progress】

She received endoscopically surgical operation. It revealed broad ligament hiatus, herniating small bowels, and inducing small bowel ileus with ascites. No necrosis was found in the herniated bowels. Then, surgical closure of broad ligament defect was conducted without resection of small bowel.

【Discussion】

Broad ligament hernia is when bowels enter defect of broad ligament inducing being unable to get out of the defect, inducing bowel obstruction. The contents of broad ligament herniation are most small bowels, following sigmoid colons, ovary, ureter (1). Uterus and ovary are placed, adjacent with peritoneal cavity and are supported with various ligaments in the pelvis; anterior, round ligament connects to inguinal canal that is utilized as the descent of testis to the scrotum in case of male; lateral, cardinal ligament connects to pelvic bone; posterior, utero sacral ligament connects to sacrum; ovarian ligament connects to ovary: broad ligament embraces all ligaments as above come into contact with peritoneal cavity (2, 3).

Broad ligament defects are formed by previous surgical operations, trauma, post-pregnancy, post rupture of ovary cyst, and spontaneous (1, 4-6). Our case had an illness history of appendectomy, but no touch with broad ligament, considering the cause of broad ligament defect is spontaneous.

Imaging diagnosis for strangulation ileus of broad ligament hernia in this case was difficult for me. Small bowel obstruction with ascites was easily found on CT, but it was difficult to find transposition site of obstruction. For diagnosis of strangulation ileus, double beak sign is a deciding factor: one beak sign between oral-sided dilated small bowel and closed loop dilated small bowel, another beak sign between anal-sided constrictive small bowel and dilated closed loop. However, in the pelvis of this patient, not only dilated small bowels but also constrictive small bowels were found. However, transposition was hard to find because sigmoid colon was interfered with discrimination for interpretation from dilated small bowels and uterus was interfered to discriminate from constrictive small bowels. Surgical operative findings revealed that bowels herniated from a defect of broad ligaments were localized. Retrospectively, localized dilated small bowels with Magatama or sea cucumber configuration were finally found out as herniated or strangulated small bowels.

A localized dilated small bowel with Magatama or sea cucumber configuration situated lateral to uterus is a deciding point to find out broad ligament herniation rather than finding double beak signs or double dot (knot) sign in this case. Then, when dilated small bowels whose diameters are greater than 3 cm, and constrictive small bowels accumulate in the pelvis, the cucumber configuration of dilated small bowel lateral to uterus is first investigated and then, the presence of double beak sign or double dot (knot) sign should be confirmed for diagnosis of broad ligament hernia.

【Summary】

We presented a fifty-three-year-old female presented in our hospital for abdominal pain persistent for two days. Small bowel obstruction was depicted with localized small bowel dilatation with configuration of sea cucumber or Magatama on abdomen CT. Endoscopically surgical procedure findings revealed broad ligament herniation whose content was localized small bowel without necrosis. The patient received the closure of broad ligament hiatus without resection of small bowels. It is borne in mind that for diagnosis of broad ligament herniation, localized dilated small bowels with configuration of sea cucumber or Magatama lateral to the uterus, are more reliable findings rather than double beak sign or double dot (knot) sign.

【References】

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