

Case 417

3. Torsion ileus

【Progress】

Our surgeon attempted to serve laparoscopic approach for less invasion, first but because of extensive adhesion in peritoneal space, they switched to open surgery. They conducted adhesiolysis and widening of adhesive narrow space to prevent small bowel re-obstruction, resulting in no need to resect small bowels because of no evidence of ischemic damages.

【Discussion】

Peri cecal hernia is an internal hernia that small intestine slides into retroperitoneal paracolic gutter through deficit of cecal mesentery. Cecal mesentery deficit or fragility is congenital or acquired (after surgery) (1, 2). After appendectomy, small bowel ileus occurs near cecum at times, past illness history might be useful for differentiation between congenital and acquired. The common characteristic among peri cecal hernia, broad ligament internal hernia and sigmoid mesentery internal hernia is the short sliding closed loop in length (3, 4).

Although the loop size of peri cecal hernia and other internal hernias, is short (5-7), there is a double beak sign; one beak sign is formed by oral dilated small intestine and oral closed loop: another, formed by anal closed loop and anal constrictive small intestine. Two beaks situate close each other. Of the three-dimensional images of CT, a sagittal image is the best for the delineation of peri cecal internal hernia, because the sliding closed loop situates at the lateral and posterior to cecum (1, 2). It is, at first, important to differentiate from dilated appendix due to appendicitis and/or infectious enteritis. The findings whether absence or presence of feces in cecum and ascending colon are useful because bowel obstruction induce constriction of cecum and ascending colon, while infectious enteritis induce dilated cecum and ascending colon with fluids and/or muddy stool (7, 8).

The early diagnosis of peri cecal hernia is important because peri cecal hernia leads prompt torsion ileus with high mortality rate. Abdomen CT is useful to identify peri cecal internal hernia and differentiate from other small intestine obstruction, paralytic ileus and/or adhesive ileus.

In summary, peri cecal hernia causes small intestine obstruction associated with oral-sided small bowel dilatation of 3cm or greater, constriction of cecum and ascending colon with least stool, double beak sign with closed dilated loop situating lateral and posterior to cecum. In our past two cases with peri cecal hernia, sagittal images of CT were useful for its identification, inducing prompt diagnosis and leading to less invasive surgery of cutting and taking off adhesive bands without resection of small bowel closed loop because of no ischemic damage of closed loop small intestine. Coronal images might be also useful to identify closed loop situating lateral to cecum and ascending colon. Axial CT images are difficult to identify peri cecal internal hernia. At any rate, sagittal images of CT are diagnostic of peri-cecal hernia.

I apologize for turning things upside down, but in our case, although dilated closed loop is found lateral to cecum, mimicking peri cecal internal hernia, dilated closed loop with two beak signs is located anterior to cecum that implies that this torsion ileus does not come from peri cecal hernia but intraperitoneal adhesive band after appendectomy. She was a 95-year-old female who received appendectomy in the past.

【Summary】

We presented a ninety-five-year-old female transported by ambulance for fever and abdominal pain. She had an operative scar in the abdomen. Double beak sign was depicted on abdomen CT. As a double beak sign situated lateral to cecum, it was, first, regarded as that torsion ileus was caused by peri cecal internal hernia. However, double beak sign is located anterior to cecum on sagittal CT, indicative of not peri cecal internal hernia but adhesive band after appendectomy. It is borne in mind that double beak sign is posterior to cecum on sagittal CT in case of peri cecal internal hernia. If beak sign is located anterior to cecum, the torsion ileus is not caused by peri cecal internal hernia but others, adhesive band after surgery, appendectomy in our case.

【References】

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