Case report

Adhesional omental hernia: A case report

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Abstract

Introduction: Omental hernias are rare and difficult to diagnose preoperatively due to a lack of specific symptoms.

Presentation of case: We report a case of adhesional omental hernia diagnosed at laparoscopy. A 38 year-old female patient with evidence of a previous caesarean section presented with an acute abdomen. We found there were omental bands stuck onto the anterior wall of the uterus, and a loop of small bowel passing through the subsequent omental defect was dilated proximally without oedema. We performed laparoscopic exploration. We saw that there were omental bands stuck onto the anterior wall of the uterus, this was partially narrowing a segment of ileum. We also saw that the proximal bowel loop occupying the omental defect was dilated without oedema.

Conclusion: This is an uncommon cause of an acute abdomen, but should be kept in mind as a differential diagnosis, especially in patients with a surgical history.

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Key learning points

Omental hernias need a multidisciplinary approach, and may need input from general surgeons, gynaecologists and radiologists. We should consider omental hernias when treating patients with an acute abdomen and a surgical history.

1. Introduction

Internal hernias occur when there is protrusion of an internal organ into a peritoneal or retroperitoneal foramen in the abdominal cavity. If a loop of bowel passes through the mesenteric or omental defect, that loop is at risk for incarceration, strangulation, or for becoming the transition point for a small bowel obstruction [1]. Mesenteric defects can occur during trauma and even during elective surgery. Internal hernias are difficult to diagnose in both men and women. However, in women it may be misdiagnosed as another cause such as torsion of an ovary or endometriosis. The rate of developing intra-abdominal adhesion after an abdominal operation is between 67 and 93% [2]. Adhesions are thought to be the cause of around 30–41% of all intestinal obstructions. For small-bowel obstruction, the proportion rises to 65–75% [2,3]. We present an uncommon cause of small bowel obstruction, due to herniation through an omental band, and discuss the management of this acute abdomen in women.

2. Case report

A 38 year-old female patient with a previous caesarean section and new diagnosis of acute abdomen was explored surgically. The patient was admitted to the emergency unit with the complaints of abdominal pain, nausea, and vomiting, with onset that day. Pain was located in the left lower abdominal quadrant without tenderness and was waxing and waning over the previous 7 h. Pain was not relieved by the analgesia. Nausea was present together with vomiting. Her body temperature was within normal limits. She had flatulence and no defecation had been observed during the last two days. There was no remarkable feature in her taken medical, social and family history. On physical examination, we observed normal bowel movements, no guarding or rebound in the lower abdomen and no abdominal distension. No abdominal distension sign was seen. Also there was no problem in the examination of the other organs. In the complete blood count the haemoglobin level was 13.0 g/dl, leucocyte value was 8770/mm3 (90.0% granulocyte) and platelet count was 263,000/mm3. CRP level was 0.03 mg/dl. The urine analysis was normal. According to the abdominal ultrasonography; cystic mass consistent largely solid-appearing area was present on the left adnexal region.

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According to the abdominal computed tomography (CT) there was a cystic mass almost occupied with a solid appearance located in the left adnexal region (Fig. 2A). The ipsilateral fallopian tube was also distended (Fig. 2B). Right ovary is in normal position. According to this clinical status, we decided to operate the patient with the diagnosis of acute abdomen suspected with torsion of ovarian tumour.

We performed laparoscopic exploration using a three port approach. We found a small amount of serous fluid which was aspirated before continuing to find the cause of acute abdomen. The appendix was normal. We saw that there were omental bands stuck onto the anterior wall of the uterus, and approximately 20 cm proximal to the ileocaecal valve, this was partially narrowing a segment of ileum (Fig. 3A). We also saw that the proximal bowel loop occupying the omental defect was dilated without oedema (Fig. 3B). The band was then successfully excised. After abdominal lavage, we confirmed normal peristalsis of the small intestine. On the first post-operative day, the patient passed flatus and a normal bowel movement. The patient was started on a liquid diet the first post-operative day and normal diet on the second post-operative day. We discharged the patient the fourth post-operative day and there were no complications in the follow-up period.

3. Discussion

Acute abdominal pain can represent a wide spectrum of conditions ranging from a quickly remitting non-specific cause to surgical emergencies. Evaluating abdominal pain requires an approach that relies on the likelihood of disease, patient history, physical examination, laboratory tests, and imaging studies. According to abdominal ultrasonography, CT and clinical status, we diagnosed an acute abdomen with suspected torsion of an ovarian tumour. However, laparoscopy revealed a different diagnosis.

Adhesions are fibrous bands that form between tissues and organs that are often induced after abdominal surgery. Intra-abdominal adhesions are a potential cause of intestinal obstruction and infertility. Adhesion-related twisting and pulling of internal organs can result in complications such as chronic abdominal pain or intestinal obstruction. Small bowel obstruction is a significant consequence of post-surgical adhesions. This can occur when an adhesion pulls or kinks the small intestine and disturbs the flow of contents through the digestive tract. Small bowel obstruction is an emergent and possibly fatal condition if not given immediate medical attention. More than 90% of patients develop adhesions following open abdominal surgery and 55–100% of women develop adhesions following pelvic surgery. Adhesions from prior abdominal or pelvic surgery can obscure visibility and access at subsequent operations. Adhesion-related complexity at reoperation adds significant risk to subsequent surgical procedures. Post-operative intra-abdominal adhesions are seen mostly between the omentum, small intestine, abdominal wall and female reproductive organs, and these adhesions can cause obstruction of the small intestine, especially the ileum. Intra-abdominal adhesions can cause several clinical problems like intestinal obstruction, atypical abdominal pain, intestinal dysfunction and infertility. The most common morbidity caused by intra-abdominal adhesions is intestinal obstruction.

More than 90% of patients develop adhesions following open abdominal surgery and 55–100% of women develop adhesions following pelvic surgery [4]. Rates of adhesion development recorded at a second cesarean delivery are ranged from 24% to 46% [5]. Adhesions from prior abdominal or pelvic surgery can obscure visibility and access at subsequent abdominal or pelvic surgery. Adhesion-related complexity at reoperation adds significant risk to subsequent surgical procedures [6]. Despite the postoperative intra-abdominal adhesions are seen mostly in omentum, small intestine, abdominal wall and female reproductive organs, the adhesions which cause to obstruction are seen mostly in small intestines, especially in ileum [7].
4. Conclusion

Our case is seldom seen, although we were able to find a similar case in the literature without previous abdominal operation, but in that case the patient was presumed to have a pelvic mass or torsion of an ovarian tumour, which actually was small intestinal dilatation. Therefore, one should take into consideration the possibility of an omental hernia when treating patients with an acute abdomen.

Conflict of interest

The authors state that they have no Conflict of Interest.

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Ethical approval statement

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

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Fig. 3. Laparoscopic findings. (A) Omental bands placed onto anterior wall of uterus (open arrow) and strangulation of ileal segment (closed arrow). (B) Omental defect (open arrow): The segment of small intestine occupying the defect proximally was dilated without oedema.