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Left sided omental torsion with inguinal hernia: Case report

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ABSTRACT

INTRODUCTION: Omental torsion is an unusual cause of acute abdominal pain. This condition may mimic other common pathologies, for instance, appendicitis or colonic diverticulitis. As a result, the diagnosis of omental torsion could be challenging to achieve preoperatively.

PRESENTATION OF CASE: A 63-year-old male patient of secondary omental torsion accompanied by the left inguinal hernia was described. The patient presented to the hospital with a painful mass occupying in the left lower quadrant of his abdomen. A computed tomography scan with intravenous contrast administration demonstrated a whirling sign of intraabdominal fatty mass extending to the left inguinal canal. Therefore, emergency laparotomy was performed. Hemorrhagic infarction of the greater omentum was observed, and double-twisting points were identified at both ends of the greater omentum. Then, the strangulated omental portion was resected. The patient recovered uneventfully and was able to be discharged home on postoperative day 4.

DISCUSSION: Secondary omental torsion has been reported more frequently than primary omental torsion. However, most of the patients were right-sided torsion. Precise diagnosis might not be possible by only clinical examination and plain abdominal radiography. The computed tomography scan, demonstrating classic whirling pattern, is useful in suspected cases. The treatment was straightforward by resection of the affected omentum.

CONCLUSION: The omental torsion is a rare cause of acute abdominal pain and could mimic other intra-abdominal pathologies.

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1. Introduction

Omental torsion is an unusual cause of sudden abdominal pain and difficult to diagnose preoperatively. This condition is classified as a primary and secondary omental torsion. The secondary omental torsion has been found to associate with the right inguinal hernia [1,2]. There were occasional reports of left-sided omental torsion [3–5]; however, none was associate with the hernia. In this article, a patient preoperatively diagnosed with left-sided omental torsion concomitant with the left inguinal hernia was presented. This work has been reported in line with the SCARE criteria [6].

2. Case presentation

A 63-year-old man presented to our hospital due to left lower quadrant abdominal pain. The untreated painless left inguinal hernia was his underlying condition. Three days before admission, he had sudden left side abdominal pain while lifting a heavy

object. Even though the pain was relieved by rest, it still occurred intermittently. On the admission date, the pain worsened and urged him to the hospital. Localized left lower abdominal pain and tenderness without any sign of intestinal obstruction was his clinical presentation. Physical examination revealed abdominal distension, painful ill-defined mass at the left lower quadrant of the abdomen. His left groin slightly bulged without tenderness. Complete blood count indicated leukocytosis (white blood cell of 11,800 cells/microliters and neutrophil proportion of 63.6%). Sigmoid diverticulitis was suspected. Computed tomography scan with intravenous contrast showed a whirling sign of intraabdominal fatty mass extending to the left inguinal canal (Figs. 1 and 2). The patient underwent emergency laparotomy. There were 200 mL of serosanguinous fluid intraperitoneally. Hemorrhagic infarction of the greater omentum was seen. The distal portion of the omentum extended into the left inguinal canal (Fig. 3). There were two twisting points at both ends of the greater omentum (Fig. 4). Omentectomy and left hernioplasty were performed accordingly. The resected omentum was submitted for pathologic examination. The patient was discharged home uneventfully on the 4th postoperative day. The pathological report was congested hemorrhagic omentum.

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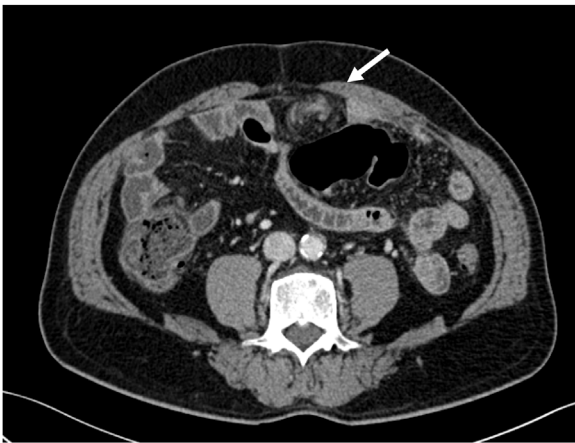


Fig. 1. Whirling sign of omental torsion on axial CT (arrow).

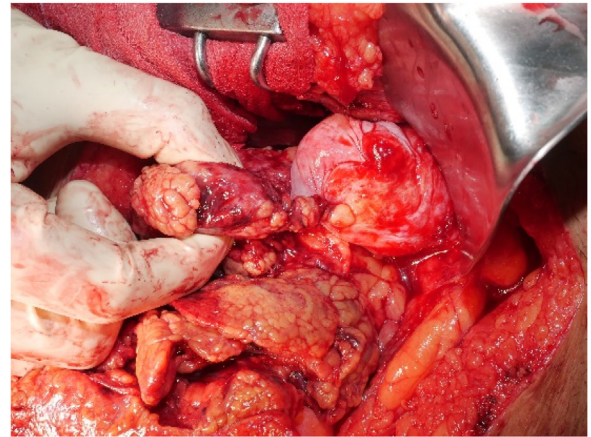


Fig. 3. Distal pivotal point between omentum and hernia sac.



Fig. 2. Coronal CT showed extension of fatty mass into left inguinal hernia.

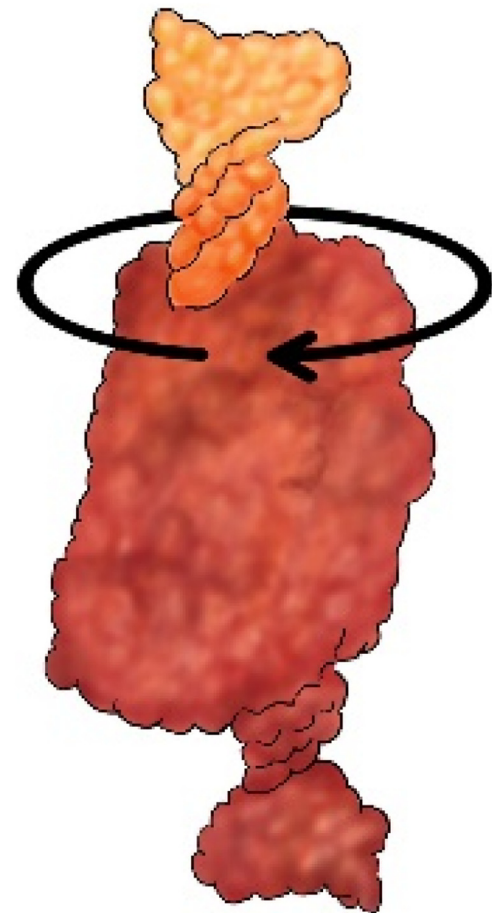


Fig. 4. Illustration of double pivotal point.

3. Discussion

Twisted omentum has been classified as primary and secondary omental torsion [7]. Primary omental torsion related to the omentum’s anatomical anomalies such as bifid omentum, irregular distribution of omental fat, especially in obese patients, and vascular anomalies [7]. Secondary omental torsion was associated with a hernia, cyst or tumor of the omentum, inflammatory foci in the peritoneal cavity, and adhesions [7–9]. Secondary omental torsion were reported more frequently than the primary omental torsion. However, most of the cases occurred on the right side [10]. Left-sided omental torsion were occasionally reported [4,5,11,12]. Double pivotal points have been reported in the secondary torsion [10]. In this case, the proximal twisted point was near the trans-

verse colon, and the distal twisted point was found between the free end of the omentum adhering to the hernia sac.

The omental torsion could occur after activity, which suddenly increases intraabdominal pressure, such as coughing, sneezing, exertion, hyperperistalsis of bowel following a heavy meal, and occupational exposure to vibration. These conditions were considered as precipitating factors. Omental strangulation could lead to infarction, causing acute abdominal pain [10].

Preoperative diagnosis by clinical examination and plain abdominal radiography could be difficult. Computed tomography scan is helpful if the classical whirling pattern was demonstrated

[13,14]. However, this sign is not pathognomonic. The whirling pattern may not present if the torsion point was not perpendicular to the computed tomography scan's transverse scanning plane [4]. Nevertheless, intraabdominal fluid may be found due to fluid extravasation from the congested and edematous omentum [14].

Treatment is resection of the affected omental segment, which could be performed laparoscopically [11,15]. However, some authors have reported successful non-operative treatment [16].

4. Conclusion

The omental torsion is an unusual cause of acute abdomen pain. Left-sided omental torsion may mimic the clinical presentation of colonic diverticulitis. This condition should be differentiated with other acute abdominal conditions, especially in patients with untreated inguinal hernia.

Declaration of Competing Interest

None.

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Ethical approval

This study was approved by the Institutional Review Board, Maharat Nakhon Ratchasima Hospital Ethics committee, reference number 061/2020.

Consent

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.

Author's contribution

- **Operating surgeon:** Dr. Setthabutr Eaupanitcharoen.
- **Patient data and image collection:** Dr. Setthabutr Eaupanitcharoen.
- **Literature review:** Dr. Setthabutr Eaupanitcharoen, Dr. Watcahra Wattanasoontornsakul.
- **Drafting the paper:** Dr. Setthabutr Eaupanitcharoen.
- **Final revision:** Dr. Setthabutr Eaupanitcharoen, Dr. Watcahra Wattanasoontornsakul.

Registration of research studies

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2. Unique identifying number or registration ID: TCTR20201004001

3. Hyperlink to your specific registration (must be publicly accessible and will be checked): <http://www.clinicaltrials.in.th/index.php?tp=regtrials&menu=trialssearch&smenu=fulltext&task=search&task2=view1&id=6854>

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