



Stomach Incarcerated in an Inguinal Hernia

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Abstract

Inguinal hernia is a common disease in general surgery division. Usually, hernial contents are intra-abdominal organs with relative high mobility, such as intestines and bladder, however stomach is rarely reported as a portion of the hernial content. Here we report a 75-year-old male patient with a left inguinal incarcerated hernia, with the incarcerated contents being part of the stomach and small intestines.

Introduction

Incarcerated or strangulated hernia is one of the most common acute abdominal diseases in the setting of surgical emergency conditions. In emergency situations, the underlying pathophysiological status increases the perioperative risk, resulting in a significant increase with regard to complication occurrence and mortality rates in such patients, besides the firmness of hernia repair is obviously lower than that of elective surgery [1]. Due to the complexity and diversity of conditions in individuals, the surgical treatment option varies. In order to achieve the best therapeutic effect, short-term and long-term benefits and risks have to be considered.

Inguinal hernia repair is the most common general surgical procedure in developed countries [2]. The principle of clinical decision making is early surgery, which can effectively prevent an incarcerated inguinal hernia from developing into a strangulated one. In surgery, it has to be clear whether the contents of the hernia have ischemia or necrosis. Here we report a 75-year-old male patient with a left inguinal incarcerated hernia, with the incarcerated contents being part of the stomach and small intestines, as well as the surgical procedure and prognosis.

Case Presentation

A 75-year-old man presented to the emergency room with a 25-h history of progressing lower abdominal pain, distention, nausea, vomiting and a bulge in his scrotum. A reducible left inguinal hernia was known for more than 20 years, otherwise he is in good health without history of trauma or surgery. The patient was afebrile and physical examination revealed a 20 cm × 20 cm left-sided inguinal scrotal mass (Figure 1), which was tender and irreducible. An impulse was felt at the external inguinal ring while the patient coughed. On auscultation, bowel sound could be heard in this mass. Computed tomography of lower abdomen and pelvis was ordered and the result showed a bulky inguinal hernia containing the antrum of stomach and portion of intestinal canals with abdominal effusion (Figure 2).

Mid-abdominal incision was made to explore the stomach and the intestines, which showed partial gastrointestinal wall ischemia and no strangulation or necrosis was found (Figure 3). Subsequently, the incarcerated gastric antrum and intestinal canals were reduced and a left-sided inguinal hernia repair was performed using the standard Lichtenstein method. After operation, he was completely recovered and discharged home. No recurrence or complications have occurred so far.

Discussion

When the abdominal pressure suddenly increases, the hernial contents are forced into hernial sac through the neck which then contracts due to the elasticity, leaving the contents stuck in the hernial sac. The most common inguinal hernial contents are intra-abdominal organs with relative high mobility, such as intestines, omentum majus, bladder and appendix, however inguinal hernia containing stomach was rarely reported in the recent decade. Kerschaefer et al. [3] reported a giant inguinal hernia containing the antrum and pylorus of stomach complicated with ischemia.

Creedon et al. [4] reported a COPD patient complicated with gastric outlet obstruction secondary to incarcerated pylorus in the inguinal hernia, possibly due to long term traction or

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Figure 1: A giant left-sided inguinal scrotal mass that cannot be reduced.

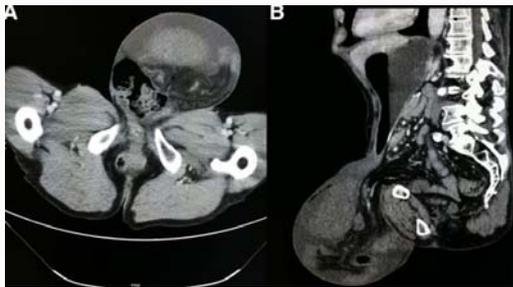


Figure 2: Lower abdominal CT scan showed a bulky inguinal hernia containing the antrum of stomach and portion of intestinal canals with abdominal effusion. (A) Coronal view. (B) Sagittal view.

compression from diaphragm in chronic obstructive lung diseases which may contribute to the stomach descent in inguinal hernial sac. Similar case with stomach incarcerated in inguinal hernia was also reported by an UK general surgeon in 2014 [5].

Emergency hernia repair is one of the most challenging conditions for general surgeons. The traditional treatment method for incarcerated hernia avoids herniorrhaphy for the fear of surgical failure caused by infection. With the advancement of surgical techniques, the abdominal exploration methods are becoming

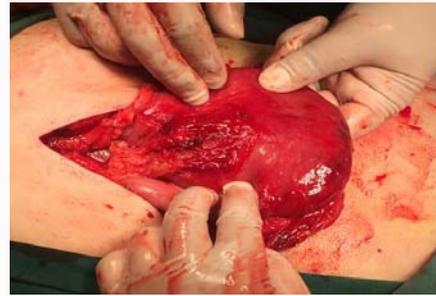


Figure 3: Mid-abdominal incision revealed partial gastrointestinal wall ischemia with no strangulation or necrosis.

increasingly diverse. The application of such techniques makes it convenient to observe the condition of the incarcerated abdominal organs. If the surgical area is not seriously contaminated or there is no risk factor for mesh infection, it is of great benefit to reduce the hernia contents and place mesh to repair the abdominal wall defect at the same time. Nonetheless, complications such as gastric outlet obstruction, gastric wall ischemia and necrosis may still occur in a long-term irreducible incarcerated stomach. A prompt surgery treatment can effectively avoid the occurrence of such complications.

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