Aspiration pneumonia as a complication of a rare type of hernia

Balazs Fazekas*, Peter Frecker, Lucy Francis, Kunal Patel

Whipps Cross Hospital, Whipps Cross Road, London E11 1NR, UK

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ABSTRACT

INTRODUCTION: Inguinal hernias are a common pathology and can contain unusual abdominal contents; the stomach is only infrequently involved due to its position in the abdominal cavity.

PRESENTATION OF CASE: An 85-year old male patient presented with symptoms of bowel obstruction and was subsequently found to have an incarcerated stomach within his chronic left-sided inguinal hernia. The patient had also developed aspiration pneumonia.

DISCUSSION: Aspiration pneumonia is a yet unreported complication of this unusual type of hernia. Our aim is to describe the presentation and management of this complication.

CONCLUSION: Development of aspiration pneumonia in a patient with an incarcerated stomach within an inguinal hernia.

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1. Introduction

Inguinal hernias are common and can occasionally contain unusual contents. Parts of the stomach have been reported to be incarcerated in inguinal hernias and this has been associated with an array of complications such as ischaemia and even gastric rupture. We would hereby like to report a patient that we encountered who had an incarcerated stomach in an inguinal hernia with a rare, to the best of our knowledge yet unreported, complication.

2. Presentation of case

An 85-year old male presented with a three day history of gastrointestinal obstructive symptoms; complaining of recurrent biliary vomiting, colicky lower abdominal pain and constipation. On note, his previous medical history included a non-invasive bladder cancer, congestive heart failure and a chronic left-sided inguinal hernia. On clinical examination, his abdomen was markedly distended and a large irreducible hernia was present with overlying bowel sounds. The haematological profile demonstrated a non-specific inflammatory picture with white cell count of 15.6 × 10⁹ cells/L and a lactate of 8.0 mmol/L. A computerised tomography (CT) scan was ordered, helping to reach the uncommon diagnosis.

The CT scan showed parts of the stomach incarcerated in the left-sided inguinal hernia (Figs. 1–2). The first segment of the duodenum, pylorus and the antrum of the stomach were all incarcerated, providing an explanation for the patient’s bowel obstruction. A nasogastric tube was promptly inserted draining 6.5 l of fluid in the first 4 h.

Moreover, the CT scan also highlighted several complications of the stomach incarceration, which would subsequently lead to the clinical deterioration of the patient. Importantly, reviewing the lung fields revealed consolidation of the lung bases (Fig. 3); the source of the pneumonia is likely to have been the fluid from the stomach, as the oesophagus was visibly dilated with fluid on the CT scan (Fig. 4). Consequently, intravenous Tazocin was started as an empirical treatment of aspiration pneumonia. Of note, there was no free fluid in the abdomen, no ischaemic changes visible in the bowel and no visible haemorrhage. Due to his medical co-morbidities, the patient was not fit for a surgical repair of the hernia. However, serial chest radiographs showed a marked improvement of his aspiration pneumonia and we are continuing supportive treatment.

3. Discussion

It is uncommon for stomach to be incarcerated in an inguinal hernia, nevertheless, there have been many reports in the literature with a large proportion of cases reported in the 1960s and 1970s. More recently there has been a move towards trying to understand the common complications of this unusual condition. Reported complications of this condition have included strangulation with ischaemia, gastric rupture, alongside the expected symptoms of bowel obstruction. To date, aspiration pneumonia has not been reported as a complication of stomach incarceration in medical literature. Gytrup et al. reported two patients with
irreducible hernias who developed aspiration pneumonia, but for these cases there was no evidence of stomach involvement within the hernias. The recognition of this complication on the CT scan can lead to the prompt administration of empirical antibiotics and can reduce delay in therapeutic treatment (Fig. 5).

4. Conclusion

Physicians and surgeons should consider aspiration pneumonia in the context of stomach incarceration in inguinal hernias. Early recognition of these complications alongside the standard treatment of the hernia is vital and could potentially reduce morbidity associated with the hernia.

Conflict of interest

None.

Funding

None.

Ethical approval

The consent of the patient was obtained for the use and submission of the history and additional material in scientific literature.

Author contributions

Balazs Fazekas wrote the article. Peter Frecker, Lucy Francis and Kunal Patel reviewed the article and helped prepare the images.
Key learning point

- A serious complication of an incarcerated inguinal hernia is an aspiration pneumonia.
- Stomach can become incarcerated within a left-sided inguinal hernia.
- CT imaging can be diagnostic of these types of rare hernias.

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