Case report

Nonoperative management of complicated hiatal hernia after transhiatal esophagectomy- case report

Sepher Lalezaria,b, Courtney R. Hanaka,* Thomas Husted\textsuperscript{a,c}

\textsuperscript{a} The Jewish Hospital, 4777 E Galbraith Rd, Cincinnati, OH 45236, USA
\textsuperscript{b} Johns Hopkins Hospital, 601 N Caroline St, Baltimore, MD 21287, USA
\textsuperscript{c} The Christ Hospital, 2139 Auburn Ave, Cincinnati, OH 45219, USA

A B S T R A C T

Introduction: Hiatal hernia is rare after transhiatal esophagectomy occurring in less than 2% of patients [5]. Due to the rare incidence of hiatal hernias after transhiatal esophagectomy overlooking this differential in a symptomatic patient can be problematic. Patients can present with recurrent pneumonia, complaints of reflux, and in the case presented small bowel obstructions. Surgery has been the mainstay of treatment for symptomatic hiatal hernias. This case report poses that nonoperative management is a viable treatment option for patients with complicated hiatal hernias after transhiatal esophagectomy.

Presentation of case: We present the case of a mechanical small bowel obstruction occurring at the esophageal hiatus in a patient four years after transhiatal esophagectomy. The patient was successfully managed nonoperatively with resolution of small bowel obstruction and persistent hiatal hernia.

Conclusion: Hiatal hernias after transhiatal esophagectomy are a rare entity. Complications of these hernias with mechanical small bowel obstructions are even less described in the current literature. It is important to recognize hiatal hernias as a potential cause of obstructive symptoms after esophagectomy. While surgical intervention may be inevitable in certain population of patients. Initial nonoperative management is a viable treatment option and should be utilized in high risk operative patients.

1. Introduction

Hiatal hernia is rare after transhiatal esophagectomy occurring in less than 2% of patients [4]. Due to the rare incidence of hiatal hernias after transhiatal esophagectomy this can be neglected as a potential differential for symptomatic patients. Patients may present with recurrent pneumonia, complaints of reflux, and in the case presented small bowel obstructions. Surgical adhesions at the esophageal hiatus as well as surgical reconstruction of the hiatus are thought to be protective against the development of hiatal hernias after esophagectomy. Small bowel obstructions within the hiatal hernia are rarely described in the current literature. This poses a complicated treatment plan for these patients especially if the patient is a poor surgical candidate due to comorbidities or malnourishment. Surgery has been the mainstay of treatment for symptomatic hiatal hernias. This case report poses that nonoperative management is a viable option for treating complicated hiatal hernias after transhiatal esophagectomy in select patients. It is of note that this case report has been reported in line with the SCARE criteria (see Fig. 1 and 2).

2. Presentation of case

A 63 year old with past medical history of esophageal adenocarcinoma status post transhiatal esophagectomy completed in 2011, presented to the outpatient office with complaints of dysphagia in 2015. A barium swallow was performed which was consistent with aspiration secondary to oropharyngeal dysphagia. Given recurrent episodes of aspiration with accompanied pneumonia an elective jejunostomy tube was placed laparoscopically. At the time of the operation a hiatal hernia was noted. Surgical repair was not pursued secondary the wide mouth of the hernia defect without signs of ischemia or obstruction. Post operatively the patient was admitted to the hospital for enteral tube feed titration and need for rehabilitation placement due to weakness secondary to malnutrition. Trophic tube feeds were started on post-operative day (POD) #1 at half strength. Tube feeds were gradually advanced to goal on POD #4 at a goal rate of 80 cc/hr full strength. The patient began to have increasing abdominal pain as well as increased bilious drainage around the jejunostomy tube once tube feeds were at goal rate. was consistent with post-operative ileus vs. small bowel obstruction. The jejunostomy tube was placed to gravity drainage with 600 cc of bilious output. POD#7 return of bowel function was noted and tube feeds were thus restarted at 20 cc/hr at half strength. POD #8

* Corresponding author.
E-mail address: crhanak@mercy.com (C.R. Hanak).

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Parental nutrition was started POD #10. POD #11 jejunostomy suction was continued with strict charting of 24 hour outputs. POD #9 bowel function was observed. However, feeding of the jejunostomy tube remained at gravity for decompression. A total of 5 days until complete resolution of obstruction was noted.

Fig. 1. CT scan showing the herniation through the diaphragm.

Fig. 2. CT scan showing the herniation through the diaphragm.

The patient again complained of abdominal pain and had increase leakage around the J-tube. A CT with intravenous as well as omnipaque contrast revealed a left diaphragmatic hernia containing stomach, small and large intestine without signs of strangulation or ischemia. A mechanical small bowel obstruction was noted within the hernia sac. A transition point at the hiatal hernia was noted with distal small bowel collapse. The patient also had small bilateral pleural effusions, moderate consolidation/collapse within both lower lobes, and small amount of free pelvic fluid without evidence of malignant recurrence. Nasogastric decompression was attempted however unsuccessful due to coiling of the tube within the surgical esophagus. The jejunostomy tube remained to gravity with supplemental enteral nutrition required of concern. In this case the patient was managed with nonoperative treatment with jejunostomy tube to gravity for decompression. A total of 5 days until complete resolution of the obstruction was noted.

When hiatal hernia after esophagostomy is accompanied by a mechanical partial small bowel obstruction, it is unclear how long the hiatal hernia had been present due to lack of imaging prior to acute presentation in 2015. The transhiatal esophagectomy was completed 4 years prior to admission. The obstruction noted on CT scan did not show signs of perforation or obstruction. Nor did laboratory values indicate elevation in lactic acid or leukocytosis. Surgical intervention was discussed due to hiatal hernia complicated by small bowel obstruction. Potentially two pathologies warrant surgical intervention for definitive treatment. However, the patient had cardiac comorbidities as well as a significant malnutrition component secondary to oropharyngeal dysphagia requiring supplemental enteral nutrition as concern. In this case the patient was managed with nonoperative treatment with jejunostomy tube to gravity for decompression. A total of 5 days until complete resolution of the obstruction was noted.

3. Discussion

Hiatal hernia occurring at the esophageal hiatus after esophagectomy occurs in 0.4–15% of patients [2]. The hernia rate is higher for minimally invasive esophagectomies than for transhiatal esophagectomies. It is hypothesized that adhesions from open surgery are responsible for the decreased hiatal hernia rate after transhiatal esophagectomy [1,2]. Secondary to the low incidence of hiatal hernia after transhiatal esophagectomy it can be easily missed when devising a differential for symptomatic patients. Diagnosing a diaphragmatic hernia in such patients can be enigmatic especially if complicated. CT scan is the best modality to detect hiatal hernias and possible complications such as ischemia, obstruction, as well as content within the hernia sac. If surgical intervention is pursued CT imaging can also assist with operative planning. Due to the concern for content incarceration or strangulation within the hiatal hernia it has been recommended that surgical repair considered [5]. Mortality rates associated with complicated hiatal hernias range from 20 to 80% if discovered late and only 10% if discovered early [3]. Surgical repair however, is accompanied by low mortality but has substantial morbidity [5]. The surgical risk of the patient must also be considered. Factors such as age, malignancy status, comorbidities, and nutritional status should be deliberated.

In this case the patient presented with hiatal hernia after transhiatal esophagostomy complicated by mechanical partial small bowel obstruction. It is unclear how long the hiatal hernia had been present due to lack of imaging prior to acute presentation in 2015. The transhiatal esophagectomy was completed 4 years prior to admission. The obstruction noted on CT scan did not show signs of perforation or obstruction. Nor did laboratory values indicate elevation in lactic acid or leukocytosis. Surgical intervention was discussed due to hiatal hernia complicated by small bowel obstruction. Potentially two pathologies warrant surgical intervention for definitive treatment. However, the patient had cardiac comorbidities as well as a significant malnutrition component secondary to oropharyngeal dysphagia requiring supplemental enteral nutrition as concern. In this case the patient was managed with nonoperative treatment with jejunostomy tube to gravity for decompression. A total of 5 days until complete resolution of the obstruction was noted.
utilized one week after jejunostomy tube placement and continued till enteral nutrition was at goal rate.

4. Conclusion

In summary, hiatal hernia is an infrequent complication after transhiatal esophagectomy. Although rare, it is important to keep this clinical entity in mind as it can be associated with serious complications. Surgical intervention may be appropriate in many cases of symptomatic hiatal hernias. However, in high risk patients non-operative management is a viable initial treatment option even in the face of mechanical partial obstruction without perforation or ischemia. In this case we present the successful nonoperative management of a patient with mechanical small bowel obstruction related to a hiatal hernia after transhiatal esophagectomy lending to the feasibility of this treatment option without definitive repair of the hiatal hernia.

Ethical approval

Ethical Approval was waved for this case report. However consent was given by the patients family member.

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Author contribution

Sepher Lalezari—literature review and editor of paper.
Courtney R. Hanak—author of case report and editor of paper.
Thomas Husted—Attending physician and editor of final paper.

Conflicts of interest

None.

Research registration number

Not required as this is a case report and not a study.

Guarantor

Courtney R. Hanak.
Sepher Lalezari.

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