

Acute diaphragmatic hernia post-esophagectomy

M. G. Houston, J. A. Kennedy

CASE REPORT

A 63-year-old male with a history of ischemic heart disease and hypertension presented with dysphagia. He was a smoker of 40 cigarettes a day and had a previous history of alcohol abuse. At endoscopy, he was found to have a tumor beginning at 38 cm from the incisors and affecting the esophagogastric junction. Pathology confirmed adenocarcinoma. Subsequent staging with PET CT scan showed a cT3N1M_x tumor. Following discussion by the multidisciplinary team, he proceeded to neoadjuvant therapy with epirubicin, cisplatin and capecitabine (ECX). The patient could only tolerate two cycles of ECX due to dehydration and weight loss. He was fed enterally with a nasogastric tube and repeat PET-CT scan showed stable disease. Following a period of nutritional support, the patient proceeded to surgery.

The patient underwent a Lewis Tanner esophagectomy. The stomach was mobilized via midline laparotomy, with preservation of the right gastroepiploic artery. Esophageal dissection, esophagogastric resection and anastomosis of the gastric conduit to the proximal esophagus was completed via a right thoracotomy. The patient was transferred to the intensive therapy unit for postoperative care. He required intravenous fluid and inotropic support in the immediate postoperative period, however, inotropes were no longer required by day one postoperatively. A chest X-ray taken on day-one post-

operatively shows apical and basal chest drains in situ in the right hemithorax with a small residual pneumothorax. There is a small pleural effusion in the left hemithorax (Figure 1).

On the third postoperative day, the patient became hemodynamically unstable and was hypotensive. Noradrenaline was restarted and phenylephrine boluses given to maintain blood pressure and urinary output. A repeat chest X-ray demonstrated an acute diaphragmatic hernia, with colon visible in the left chest (Figure 2). The patient proceeded to re-laparotomy. At operation, the transverse colon and omentum, which were both viable, were reduced into the abdominal cavity and the hiatus repaired primarily. A 70-cm segment of small bowel beginning at 50-cm from the duodenojejunal flexure was found to be ischemic; this was resected and an end jejunostomy and mucus fistula fashioned. The patient returned to the intensive care unit (ICU) and made a complete recovery. He is currently being treated in an intestinal failure unit and is awaiting restoration of gastrointestinal continuity.

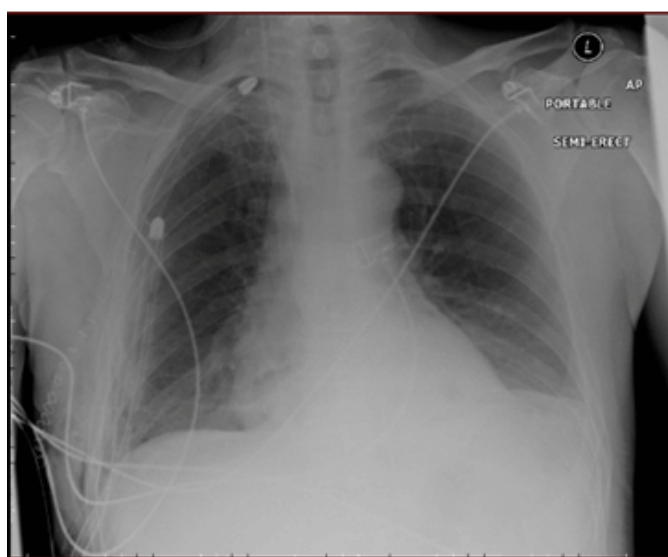


Figure 1: Chest X-ray taken on the first postoperative day. An apical and basal chest drain is in situ in the right hemithorax, which has a small residual pneumothorax. There is a small pleural effusion in the left hemithorax.

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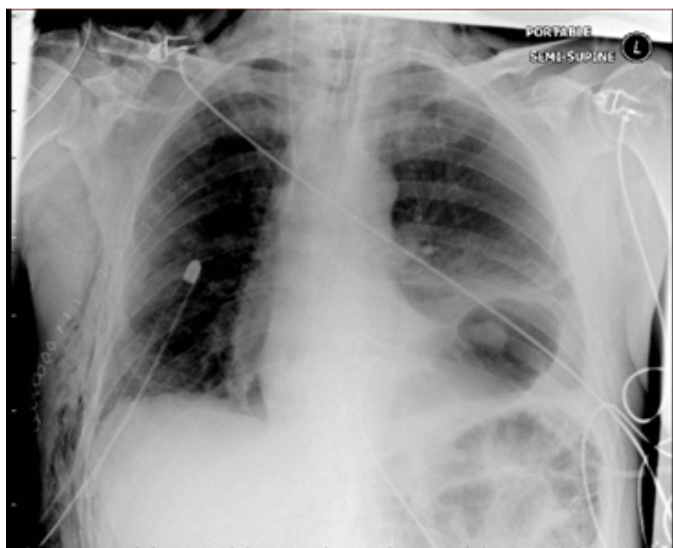


Figure 2: Chest X-ray taken on the third postoperative day. There is an acute diaphragmatic hernia with colon visible in the left hemithorax. Note the apical drain in the right hemithorax. The pneumothorax has increased slightly in size and there is new surgical emphysema of the chest wall.

DISCUSSION

Symptomatic post-esophagectomy diaphragmatic herniation necessitating repair is rare. A large case series by Price et al. [1] of 2,182 patients who had undergone esophagectomy found 15 patients (0.69%) required surgery for a symptomatic diaphragmatic hernia. The mean time of onset following esophagectomy was one year nine months; presentation in the immediate postoperative period, as in this case, is rarer still.

Although the number of patients requiring hernia repair is small, some studies have found that the incidence of post-esophagectomy may be higher than previously thought. Ganeshan et al. [2] and Crespín et al. [3] report occurrence rates of 15% and 14%, respectively. However, the consensus view in literature is that all patients who are symptomatic be offered repair.

CONCLUSION

In this case of a patient who was acutely unwell following of esophagectomy, a chest X-ray was sufficient to make diagnosis of acute diaphragmatic hernia the decision mandating re-laparotomy; further imaging was not necessary.

Keywords: Hernia, Oesophageal cancer, Oesophagectomy, Postoperative complications

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M. G. Houston – Substantial contributions to conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published

J. A. Kennedy – Analysis and interpretation of data, Revising it critically for important intellectual content, Final approval of the version to be published

Guarantor

The corresponding author is the guarantor of submission.

Conflict of Interest

Authors declare no conflict of interest.

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