Recurrence after composite repair of a giant hiatus hernia: ‘the golf club’ deformity is a distinctive clinical and radiological picture

RV Furtado¹, GL Falk^{1–3}, SJ Vivian²

¹Concord Repatriation General Hospital, Sydney, Australia

²Sydney Heartburn Clinic, Lindfield, Australia

³Macquarie University, Sydney, Australia

ABSTRACT

BACKGROUND Recurrence of a hiatus hernia after cardiopexy repair can obstruct the lower oesophagus but also provide characteristic radiographic images after a barium meal.

CASE HISTORY Two patients with recurrence of a hiatus hernia underwent repeat surgery. Here, we provide and discuss diagnostic imaging, surgical findings and outcome for these male and female patients.

CONCLUSIONS Repeat surgery is indicated in patients with recurrence of a hiatus hernia after repair.

KEYWORDS

Hiatus hernia – PEH – Recurrence – Composite repair

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CORRESPONDENCE TO

Gregory Falk, E: sydney.heartburn@gmail.com

A recurrent hiatus hernia after repair of a massive hiatus hernia can present in several ways (a telescoping recurrence, a para-oesophageal recurrence, or a sliding hiatus hernia of the cardio-oesophageal junction (COJ)) and can have a complex appearance on barium studies.¹ A composite fundoplication failure may present a different picture.²

Repair methods have been reported by Russell³ and Menguy⁴ but, currently, few surgeons use such methods.^{5,6} Repair can be managed only through surgery. A characteristic appearance is observed after a barium meal. Awareness of the potential presentation and imaging appearance may help management.

Case History

A giant hiatus hernia with symptoms of chronic volvulus (‘para-oesophageal hernia’) was repaired in a 77-year-old male (patient 1) by laparoscopy. The diaphragmatic hiatus was repaired using 0-Ethibond (Ethicon, Somerville, NJ, USA). A composite repair with cardiopexy and fundoplication was done (Fig 1) according to a method reported previously.⁷

Four months after surgery, dysphagia occurred and was associated with haematemesis. Emergency gastroscopy demonstrated two ulcers in the herniated stomach. The main body of the stomach could not be entered due to angulation. Barium swallow showed acute angulation at the COJ, with

reherniation of the anterior aspect of the fundoplication into the thorax (Fig 2 and 3). Laparotomy demonstrated anterior hiatal failure, with the anterior fundoplication herniated into the chest. However, the COJ was held down by cardiopexy, which generated torsion and obstruction.

Surgical repair of a 40% PEH was undertaken in a similar manner in a 66-year-old female (patient 2) suffering from heartburn, regurgitation, early satiety, dyspnoea, and episodes of pulmonary aspiration. She presented to our unit

Figure 1 Construction of the composite fundoplication

Figure 2 Erect, anteroposterior barium oesophagogram showing a recurrent hiatal hernia in patient 1. The body of the stomach has telescoped through the wrap (arrow) to lie within the chest (arrowhead). The image suggests that the cardio-oesophageal junction is in the mediastinum, but this appearance did not correspond with surgical findings.

Figure 4 Erect lateral barium oesophagogram of patient 2 showing recurrence of a hiatal hernia. The cardio-oesophageal junction appears to be in the mediastinum (small arrow). The posterior fundoplication wrap is intact (large arrow) but anterior failure of the hiatus is noted.

Figure 3 Erect, lateral barium oesophagogram in patient 1 showing a characteristic 'golf club' appearance.

again 6 months later with epigastric pain and early satiety after eating, and had dysphagia. The endoscope could not pass the COJ but barium studies showed a distinct appearance (Fig 4). At revision surgery, anterior failure of the hiatus and anterior reherniation of the fundoplication was demonstrated. The cardiopexy remained *in situ* in the abdomen and generated torsion.

Discussion

In some patients, anterior failure of hiatal repair and persistence of the cardiopexy can result in obstruction. Severe obstruction of the oesophagus or upper stomach necessitates revision surgery. Radiography demonstrates oesophageal filling with gastric bubbles on the bottom reminiscent of a 'golf club'. If this feature is seen, anterior failure of the hiatus and reherniation of the anterior portion of the 360° fundoplication should be expected. Dysphagia and obstruction are indications for surgical repair rather than medical management. Dilatation is not indicated because it is impractical and because symptoms arise due to axis deviation (which stop passage of the gastroscop) and not a stenosis.

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