

LETTER TO THE EDITORS

Incarcerated left diaphragmatic hernia following left hepatectomy for living donor liver transplantation

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Dear Sirs,

We read with great interest the paper by Kousoulas *et al.* reporting 'Living donor liver transplantation (LDLT): effect of the type of liver graft donation on donor mortality and morbidity' [1]. To our knowledge, six cases of diaphragmatic hernia (DH) after donor hepatectomy have been reported and all of the previous cases were observed on the 'right side' [1–4]. However, DH may also occur after 'left' donor hepatectomy.

Case: A 43-year-old Bolivian man was referred to our hospital with a 2-day history of epigastric pain, nausea, and vomiting after drinking alcohol at his home party. The patient had undergone left hepatectomy with caudate lobe resection for LDLT 34 months prior at our hospital; laparotomy did not reveal any abnormal findings, especially in the diaphragmatic hiatus. The postoperative course was uneventful. He had been well during routine surveillance in our outpatient clinic, without any weight loss, experience of malabsorption, or liver dysfunction until this event.

On admission, physical examination revealed moderate dyspnea and peritoneal reaction with focal epigastric tenderness. Further, there was no evidence of an incisional hernia or an abdominal mass. A chest radiograph showed a huge mass in the left lower lung field and that the heart and trachea were shifted to the right side (Fig. 1a). An abdominal computed tomography scan on coronal reformation revealed a left-sided DH with partial gastric obstruction (Fig. 1b). Laboratory data on admission showed a white blood cell count of 25840/mm³ and a C-reactive protein level of 25.8 mg/dl.

With a diagnosis of large incarcerated left DH, he underwent an emergency laparotomy. The stomach and greater omentum were protruded into the left hemi-diaphragmatic defect with an irregular margin of 4 cm × 3 cm. We were able to reduce these herniated contents into the abdominal cavity (Fig. 1c, 1d). A defect in the left diaphragm was 2 cm away from the hiatus, and it was repaired with interrupted 2–0 polypropylene sutures without any tension; we did not have to use a mesh for the repair. The stomach was not perforated, but the greater curvature of the stomach and the

greater omentum revealed partial ischemic change (Fig. 1e). He underwent partial resection of the greater curvature of the stomach (Fig. 1f). The patient recovered uneventfully, and he was discharged on postoperative day 18. He has been doing well for 21 months after surgical repair of the DH.

In our patient, one of the causes of DH was thought to be an intraoperatively unrecognized mechanical or thermal injury to the diaphragm [5] during donor hepatectomy, although this mechanism is rather speculative. Thus, we should perform donor hepatectomy more carefully, and DH should be considered as a potential late complication.

Shugo Mizuno, Akihiro Tanemura and Shuji Isaji
*Department of Hepatobiliary-Pancreatic and Transplant
Surgery, Mie University Graduate School of Medicine,
Tsu, Japan*
e-mail: mizunos@clin.medic.mie-u.ac.jp

Conflict of interest

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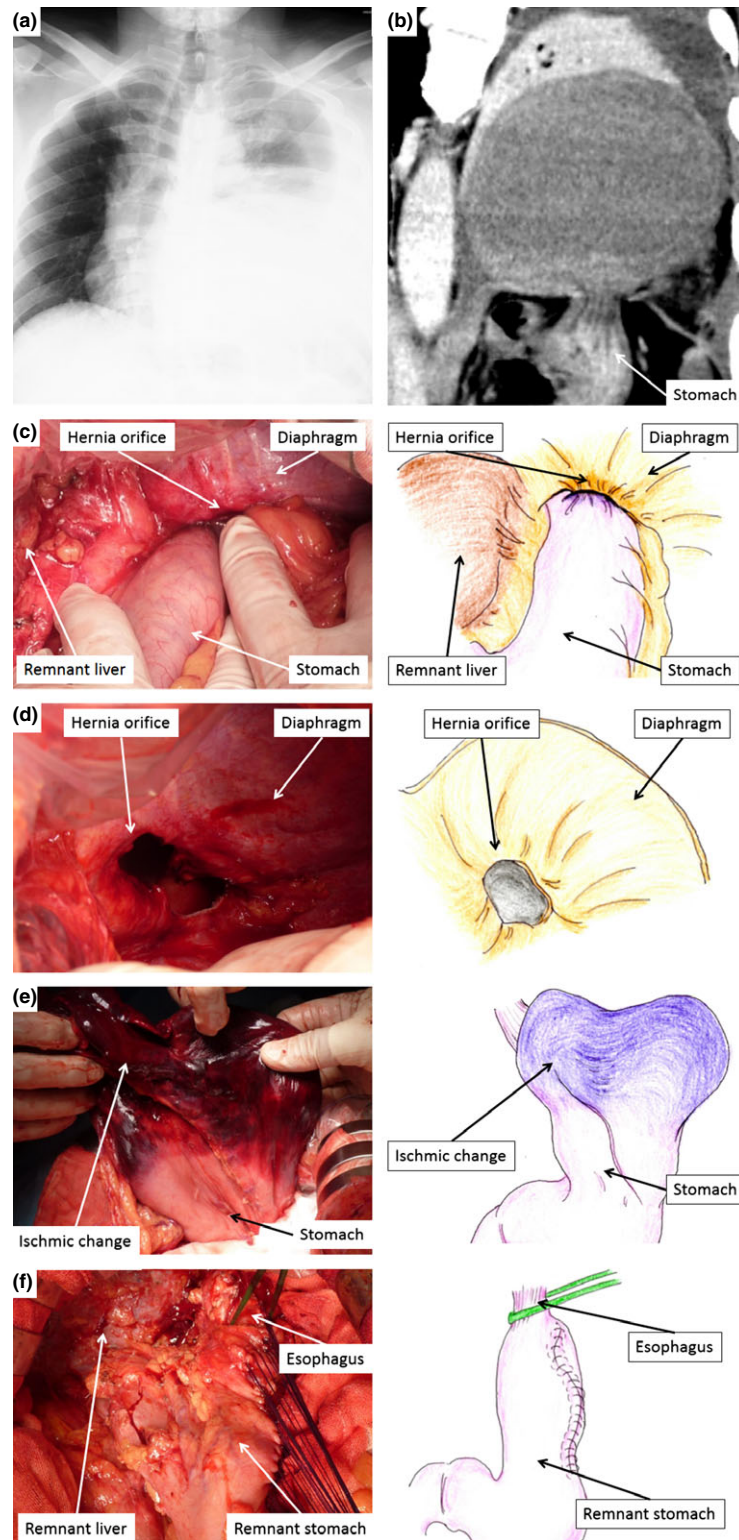


Figure 1 a) A chest radiograph showed a huge mass in the left lower lung field and that the heart and trachea were shifted to right side. b) A computed tomography scan on coronal reformation revealed a left-sided diaphragmatic hernia with partial gastric obstruction. c) The stomach and greater omentum were protruded into the left hemi-diaphragmatic defect. d) The hernia orifice was irregular with margins that were 4 cm × 3 cm in size. e) The greater curvature of the stomach and the greater omentum revealed partial ischemic change. f) A partial resection of the greater curvature of the stomach was performed.

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