OMCR

Oxford Medical Case Reports, 2020;10,367–368

doi: 10.1093/omcr/omaa091
Clinical Image

CLINICAL IMAGE

Acute peritonitis caused by gastric insufflation at endoscopy in gastric ulcer penetration into giant cyst of the left hepatic lobe

Shuichi Fukuda*,†, Atsushi Gakuhara, Hajime Ishikawa and Masatoshi Inoue

Department of Gastroenterological Surgery, Kindai University Nara Hospital, Nara, Japan

*Correspondence address. Department of Gastroenterological Surgery, Kindai University Nara Hospital, 1248-1, Otoda-cho, Ikoma, Nara 630-0293, Japan. Tel: +81-743-77-0880; Fax: +81-743-77-0901; E-mail: s.f4911@nifty.com

An 80-year-old woman with abdominal distention in the epigastric region and decreased appetite of 3 months duration underwent abdominal computed tomography (CT). CT revealed the presence of a giant cyst, 10 cm in size, in the left hepatic lobe (Fig. 1A). Very slight air was noted in the gastric wall attached to the liver cyst on CT. Endoscopy revealed an ulcerative lesion in the gastric angle of the lesser curvature along with a pinhole-sized perforation site at the bottom of the gastric ulcer. Serum anti-*Helicobacter pylori* immunoglobulin G antibody titer was elevated. Based on these findings, the patient was diagnosed with gastric ulcer penetration into the liver cyst. Following endoscopy, the patient complained of tenderness in the epigastric region. Laboratory findings demonstrated an increased white blood cell count, 20 900/μl and an increased C-reactive protein concentration, 19.0 mg/dl. Abdominal CT following endoscopy revealed an air-fluid level in the liver cyst, most likely caused by the forced

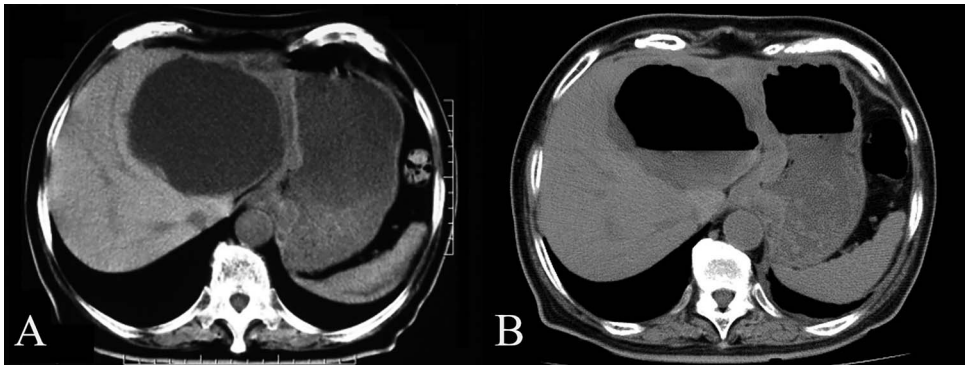

Figure 1: Abdominal CT pre- (**A**) and post-endoscopy (**B**). (A) Abdominal CT reveals the presence of a giant cyst, 10 cm in size, in the left hepatic lobe. (B) Abdominal CT following endoscopy reveals an air-fluid level in the liver cyst, most likely caused by the forced air administered during endoscopy.

†Shuichi Fukuda, http://orcid.org/0000-0001-6967-3025

Received: August 2, 2020; **Revised:** August 20, 2020; **Accepted:** August 24, 2020

air administered during endoscopy (Fig. 1B). No intraperitoneal free gas or ascites was observed on CT.

Emergency surgery was performed with a diagnosis of acute peritonitis caused by gastric insufflation at endoscopy. The gastric body on the lesser curvature was rigidly adhered to the left hepatic lobe on its posterior surface. Detachment of adhesions between the liver and stomach was difficult; therefore, the liver cyst wall was circumferentially incised, leaving it partially attached to the stomach side. After confirming the pinhole-sized perforation site, simple suture closure and omental patch covering were performed.

Gastric ulcers typically perforate into the abdominal cavity but can also penetrate into various adjacent organs, including the pancreas, transverse colon and spleen [1–3]. However, the penetration of gastric ulcers into the liver cyst is extremely rare. Endoscopists should bear in mind that endoscopy for such cases can result in acute peritonitis.

ACKNOWLEDGMENTS

The authors would like to thank Enago (www.enago.jp) for the English language review. This research did not receive any specific grant from funding agencies in the public, commercial or not-for-profit sectors.

CONFLICT OF INTEREST STATEMENT

None declared.

ETHICAL APPROVAL

This study was approved by the Ethics Committee of our institution (approval number: 20-10).

CONSENT

Written informed consent was obtained from our patient.

GUARANTOR

The guarantor of this manuscript is Shuichi Fukuda, corresponding author.

REFERENCES

1. Fujihara S, Mori H, Nishiyama N, Kobara H, Masaki T. Giant gastric ulcer penetrating into the pancreas. *Arab J Gastroenterol* 2012;**13**:158–60. doi: 10.1016/j.ajg.2012.06.007.
2. Iwasaki Y, Kubota K, Shimoda M, Ishikawa K, Satoh N. Formation of gastrocolic fistula during treatment for peptic ulcer. *Dig Endosc* 2009;**21**:208–10. doi: 10.1111/j.1443-1661.2009.00889.x.
3. Glick SN, Levine MS, Teplick SK, Gasparaitis A. Splenic penetration by benign gastric ulcer: preoperative recognition with CT. *Radiology* 1987;**163**:637–9. doi: 10.1148/radiology.163.3.3575707.