Upper Gastrointestinal Bleed Due to Invasive Hepatocellular Carcinoma and Hepato-Gastric Fistula

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A 69-year-old man with cirrhosis of the liver, possibly secondary to Nonalcoholic Fatty Liver Disease (NAFLD) and multifocal Hepatocellular Carcinoma (HCC) post three sessions of Transcatheter Arterial Chemoembolization (TACE) in the past 8 months presented with Upper Gastrointestinal (UGI) bleed. The last session of TACE was performed two months prior to the presentation. After initial hemodynamic resuscitation an UGI endoscopy was performed which showed a large antral opening at the lesser curvature of the stomach, 3–4 cm proximal to the pylorus with an ulcer at its mouth (Figure 1). The opening led to an obvious track extending distally. Attempts to enter the track were not made due to the high risks involved. The active ooze of blood noted

Figure 1 Upper GI endoscopy showing a fistulous opening in the antrum of the stomach with an ulcer.

Figure 2 Bleed from the ulcer controlled with the hemoclip application.

Figure 3 A transverse section from a CECT study with oral contrast showed an exophytic lesion arising from the left lobe of the liver with few air foci within.

Keywords: hepatic gastric fistula, hepatocellular carcinoma, transcatheter arterial chemoembolization

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Abbreviations: HCC: Hepatocellular Carcinoma; NAFLD: Nonalcoholic Fatty Liver Disease; TACE: Transcatheter Arterial Chemoembolization; UGI: Upper Gastrointestinal

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from the ulcer was controlled with hemoclip application (Figure 2). Biopsies were avoided in view of active bleed at the time of UGI endoscopy. A subsequent computerized tomographic study with oral contrast showed an exophytic lesion arising from the left lobe of the liver with few air foci within (Figure 3). A fistulous communication between the mass and the stomach wall was also demonstrated (Figure 4). IV contrast was avoided in view of the associated renal failure. The patient was monitored for

Figure 4 Two consecutive coronal CECT sections demonstrating the fistula track.

next few days and discharged as there was no evidence of a recurrent bleed.

Hepatogastric fistula, usually seen as a complication of pyogenic and amebic liver abscess is reported as a rare complication in patients with HCC. While few studies attribute the fistulation to the local spread of tumor and metastasis, some consider the same to be a complication of TACE. In a study by Nakashima et al.¹ autopsy studies on 232 patients with HCC showed metastasis to the stomach and small intestinal in 5.8%. Similarly, Lin et al.,² studied 2237 cases of HCC and found GI metastasis in 11 cases. The presumed routes of metastasis were direct spread where tumor cells directly invaded the contiguous GI tract via adhesion to serosa or hematogenous where tumor thrombi initially invaded the portal system and later disseminated by hepatofugal spread to the GI tract. Several cases of hepatogastric fistula in patients with HCC post-TACE have also been reported.³⁻⁶ It has been hypothesized that adhesions between the tumor capsule and the gastric serosa, secondary to TACE-induced inflammatory reaction leads to the development of a fistula.³ Regurgitation of particles used for embolization into the gastric arteries or abnormal origin of gastric arteries from hepatic arteries leading to ischemic necrosis of stomach wall has also been thought of as another contributing factor.⁷ In the case of the patient presently under discussion, we were successful in controlling the bleed and preventing a catastrophe but the long-term management is challenging. Whether TACE is the culprit, a facilitator or just an innocent bystander of an ongoing fistulization is still

unclear. While the debate goes on one thing that remains clear is the short survival and dismissal effect of any therapy hepatogastric fistula carries.

CONFLICTS OF INTEREST

The authors have none to declare.

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