

Transjugular intrahepatic portosystemic shunt as bridge-to-surgery in refractory gastric antral vascular ectasia

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Abstract

Gastric antral vascular ectasia (GAVE) may cause gastrointestinal bleeding (GIB). The treatment of GAVE relies on endoscopic approaches such as electro-

coagulation (argon plasma coagulation, laser therapy, heater probe therapy, radiofrequency ablation), cryotherapy, and band ligation. In refractory cases, antrectomy may be considered. In the event of an associated cirrhosis and portal hypertension, it has been suggested that antrectomy could be an option, provided the mortality risk isn't considered too great. We report the case of a 67-year-old cirrhotic patient who presented with GAVE related GIB, unresponsive to multiple endoscopic treatments. The patient had a good liver function (model for end-stage disease 10). After a multidisciplinary meeting, a transjugular intrahepatic portosystemic shunt (TIPS) procedure was performed, in order to treat the cirrhosis associated ascites. The outcome was successful. An antrectomy was then performed, with no recurrence of GIB and no transfusion need during three months of follow up. In this case, the TIPS procedure achieved a complete ascites regression, allowing a safer surgical treatment of the GAVE-related GIB.

Key words: Gastric antral vascular ectasia; Gastrointestinal bleeding; Cirrhosis; Ascites; Transjugular intrahepatic portosystemic shunt; Antrectomy

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Core tip: Gastric antral vascular ectasia (GAVE) may cause gastrointestinal bleeding. Antrectomy should be considered in refractory cases. In the event of an associated cirrhosis and portal hypertension, decision of surgery must be pondered given a higher risk. We report the case of a refractory GAVE, in a cirrhotic patient with ascites. A transjugular intrahepatic portosystemic shunt procedure was performed, allowing complete ascites regression. The surgery was then judged to be less risky. An antrectomy was thus performed, with favorable outcome. Antrectomy may be an option in refractory GAVE, in this setting, provided liver function is sufficient and cirrhosis is compensated.

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TO THE EDITOR

We have read with interest the article by Jin *et al*^[1] entitled "Successful treatment of refractory gastric antral vascular ectasia (GAVE) by distal gastrectomy: a case report". Treatment of GAVE relies on the destruction of the pathological mucosa^[2]. It is mainly based on endoscopic approaches, which includes electrocoagulation [argon plasma coagulation (APC), laser therapy, heater probe therapy, radiofrequency ablation], cryotherapy, and band ligation^[2]. GAVE is unresponsive to transjugular intrahepatic portosystemic shunt (TIPS)^[3]. In refractory cases, antrectomy is a therapeutic option, as reported by Jin *et al*^[1]. While antrectomy was a valid therapeutic strategy, given their patient had no history of liver disease, surgery should be considered with caution when cirrhosis and portal hypertension are associated with GAVE^[2,4]. Mortality rates have been reported to be as high as 50% when GAVE and cirrhosis are associated^[5]. Thus, it has been suggested in a recent systematic review, that antrectomy "may be considered in otherwise well compensated cirrhotic patients with refractory bleeding" in the setting of GAVE^[2].

We report on a 67-year-old male patient who presented with gastrointestinal bleeding (GIB) in January 2013. Past history included a dysmetabolic cirrhosis with ascites, normal prothrombin time, normal bilirubinemia (17 $\mu\text{mol/L}$), and a mechanical aortic valve replacement requiring anticoagulation. He had endoscopic and histological features of GAVE, with active bleeding. He was treated by APC. GIB persisted until April 2014, with hemoglobin levels ranging from 6.3 to 9.4 g/dL, requiring 3 additional APC sessions, 4 radiofrequency sessions, and 92 packed red blood cells (pRBC) transfusions (mean 5.7 per month). Antrectomy was initially ruled out because of refractory ascites. Based on the patients' model for end-stage disease score which was of 10 (normal bilirubinemia), and in accordance with the American Association for

the Study of the Liver (AASLD) recommendations^[6], a team including hepatologists, interventional radiologists, and transplant physicians agreed on the indication of a TIPS procedure. The TIPS was performed in May 2014 and allowed complete ascites regression. Other than a transient encephalopathy, the procedure was well-tolerated. As transfusion-dependency persisted at 6 mo post-TIPS (19 pRBC, mean 4.2 per month), an antrectomy was performed in September 2014. Post-operative outcome was uneventful. Within three months, no GIB had occurred, hemoglobin levels were stable, above 11.2 g/dL, and transfusion needs were abolished.

The aforementioned case report mentions that surgery "has significant mortality and morbidity risks, especially in the setting of portal hypertension and cirrhosis". We totally agree with this assertion^[2,4,5]. In our patient, refractory ascites did not allow surgery at first. A TIPS procedure was thus performed after all contraindications were ruled out by a multidisciplinary team, according to the AASLD recommendations^[6]. Unsurprisingly, it did not dramatically improve the transfusion-dependency^[2,5], but it did result in complete ascites regression, allowing a safer surgical treatment of this GAVE-related GIB. In conclusion, TIPS procedure may be a bridge-to-surgery in this setting.

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