

[EDITORIAL]

Therapeutic Strategy Using Interventional Radiology for Refractory Esophageal Varices Resistant to Endoscopic Treatment

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Esophageal varices (EVs) may be present in around half of patients with cirrhosis. Since variceal hemorrhaging can cause high rebleeding and mortality rates, preventing the first episode of variceal bleeding is crucial in patients with high-risk EVs. Endoscopic procedures, including endoscopic variceal ligation (EVL) and endoscopic injection sclerotherapy (EIS), are widely used to arrest and prevent bleeding as the first-line choice for the treatment of EVs. However, in refractory cases, as presented in Fujii's report (1), interventional radiology (IVR) therapies are additionally and/or alternatively performed to control them. According to previous reports, IVR procedures for EVs uncontrollable by endoscopic treatment (ET) alone include two methods: embolization of the collateral vessels and varices, such as via percutaneous transhepatic obliteration (PTO) (2), and decompression of the portal venous pressure, such as via partial splenic embolization (PSE) (3) and transjugular intrahepatic portosystemic shunt (4). However, as endoscopic procedures generally play a major role in the treatment of EVs not only emergently but also electively and prophylactically in many cases, there are few reports regarding the safety and efficacy of IVR procedures for cases with intractable EVs that are difficult to treat by ET.

We herein report the findings of our previous study concerning a novel therapeutic strategy for EVs using ET, mainly EIS-based therapy, combined with PSE according to the Child-Pugh (C-P) classification (5). Our statistical analyses revealed that adjunctive PSE and pretreatment C-P class A were independently associated with reduced cumulative recurrence rates of EVs post-ET. From the perspectives of portal-splenic hemodynamics and the hepatic functional reserve, PSE before or after ET was able to prevent posttreatment variceal recurrence in patients with C-P class A, and

PSE prior to ET was reasonable for the long-term eradication of EVs following ET in C-P class B or C cases.

In addition, Fujii et al. recently reported the first use of transileocolic obliteration (TIO) for EVs with a large paraesophageal vein resistant to repeated EVL and EIS (1). In general, a transileocolic approach is indicated for cases in which percutaneous transhepatic operation is impossible/difficult due to severe liver atrophy, ascites, and tumorous lesions in the liver. Because of the recurrence of EVs immediately after ET, the authors attempted TIO, in which the ileocolic vein was exposed under laparotomy and a catheter was inserted into the portal vein to embolize the varices, following unsuccessful PTO procedures due to the meandering of the blood supply tract. This operation was technically successful, and EVs were significantly improved, with no subsequent recurrence noted. In their case, the hepatic function was also ameliorated; however, portal vein thrombosis and ascites were observed postoperatively.

Finally, considering the inability to use both transhepatic and transileocolic access, another alternative approach for portal venous system is transsplenic access. Gong et al. reported that success rates of percutaneous transsplenic embolization of EVs or gastric varices was 89% (6), similar to previous reports in which transsplenic procedures under ultrasound guidance were successfully performed in around 90% of patients (7, 8). Recent technological progress with embolization of the puncture tract using hemostatic agents, such as gelatin sponges and vascular plugs, has helped reduce the risk of bleeding and increase the procedure safety (9, 10). For your reference, Figure presents our experience with the percutaneous transsplenic operation through the infarct site caused by previous PSE under contrast-enhanced ultrasonography to minimize hemorrhagic compli-

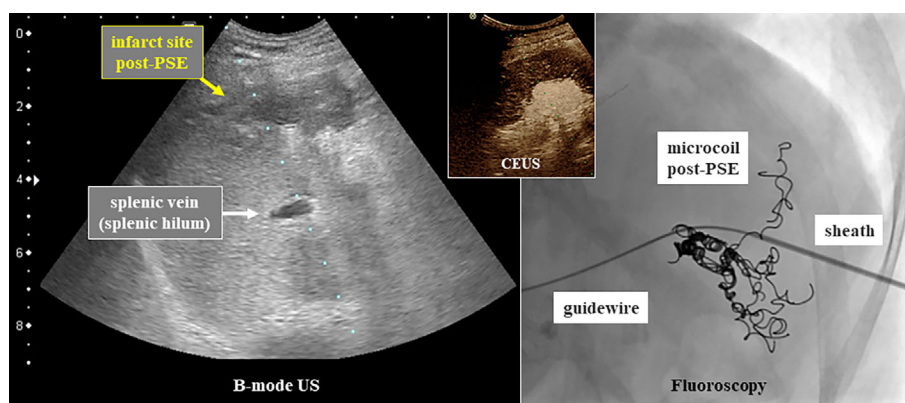


Figure. Percutaneous transsplenic operation to minimize hemorrhagic complications (our case). Percutaneous transsplenic obliteration is performed through the infarct site caused by previous partial splenic embolization under contrast-enhanced ultrasonography for a case with refractory encephalopathy. PSE: partial splenic embolization, US: ultrasonography, CEUS: contrast-enhanced ultrasonography

cations.

In conclusion, ET is the first therapeutic line for patients with EVs; however, for those with refractory diseases that are resistant to ET, broad knowledge and advanced technology with alternative treatment options, namely IVR therapies, may lead not only to prevention of variceal hemorrhaging but also improvement in the hepatic function and prognosis. Therefore, the accumulation of as many cases as possible is essential in order to establish a novel therapeutic approach to manage intractable EVs that are difficult to treat by ET alone.

The authors state that they have no Conflict of Interest (COI).

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