Balloon-Occluded Retrograde Transvenous Obliteration for Gastric Varices with Plural Draining Veins: Effectiveness of Coil Embolization for Collaterals

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Dear Sir,

A 60-year-old woman was admitted to our hospital for the treatment of gastric varices which had gradually grown larger. Because a computed tomography showed a gastroduodenal shunt (GRS), we carried out balloon-occluded retrograde transvenous obliteration (B-RTO) for her gastric varices. An occlusive balloon catheter was inserted into the GRS through the left renal vein and venography was performed. The gastric varices were partly opacified because of high blood flow to another GRS and to the inferior phrenic vein. First, the super selective insertion to another GRS was successful, and the coil embolization was performed. Second, a catheter was inserted via the inferior phrenic vein, and coil embolization was performed for the variceal drainage vein. After coil embolization, using 5 ml 5% ethanolamine oleate, the gastric varices were filled and a feeding vein was opacified (fig. 1). At endoscopic examination 3 months after B-RTO, the patient's gastric varices had disappeared.

B-RTO in gastric varices was first described in 1991, and has become a major treatment of large gastric fundal varices with a GRS. However, difficult cases have been reported, e.g. in our own experiences in gastric varices with plural draining veins. We have demonstrated that treat-

ment for gastric varices with plural draining veins was performed safely using a coil embolization technique with B-RTO. The clinical implications of this procedure are still not clear and further evaluation should be performed.

Fig. 1. Angiography showed successful coil embolization of the collateral drainage veins and the gastric varices filled with sclerosant. A feeding vein (arrow) is opacified.