



# Transparent cap-assisted endoscopic sclerotherapy for esophageal variceal hemorrhage compared with conventional sclerotherapy: A retrospective case-control study

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To the Editor,

Esophageal variceal bleeding (EVB) is a serious complication of portal hypertension in patients with hepatic cirrhosis (1). Currently available therapeutic interventions for EVB, such as endoscopic injection sclerotherapy (EIS) and endoscopic variceal ligation, cannot completely prevent the recurrence of bleeding owing to uncontrollable portal pressure (2). To improve hemostatic efficiency and reduce adverse effects, we adopted a newer technique called the cap-assisted EIS to improve hemostatic efficiency and reduce adverse effects of traditional endoscopic procedures.

Eighty-five patients [70 males and 15 females; mean age (range), 52.36 years (38-65 years)] with EVB were included. Underlying causes of EVB included hepatitis B cirrhosis (n=73), alcoholic cirrhosis (n=7), and unexplained cirrhosis (n=5). In the cap-assisted EIS group (CFG), the cap was installed and fixed to the head of the endoscope before the procedure; bleeding veins were identified and the cap was attached to the vein. After injection, the puncture site was compressed for 5 min using the cap. This method helped in achieving a better hemostasis after compression with the cap and ice-cold water irrigation. The incidence of esophageal ulcer with cap-assisted EIS was comparable with that with conventional endoscopic therapy (NCF group). The incidence of short- and long-term complications was lower in the CFG group than in the NCF group; however, the between-group difference was not statistically significant.

Cap-assisted endoscopy has been widely used for gastroscopy, colonoscopy, and endoscopic retrograde cholangiopancreatography (3-5). Treatment with cap-assisted EIS achieved significantly better

hemostasis than that with conventional methods. We employed cap-assisted EIS to minimize the adverse effects and overcome the limitations of the current procedures (conventional methods). Furthermore, transparent cap-assisted EIS affords a clear visualization of the target vein owing to the hemostatic effect of compression. In the light of our experiences, we believe that cap-assisted EIS merits a more rigorous evaluation to demonstrate its efficacy over conventional methods.

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