

Supplementary Material 1.

Procedure details

I: Endoscopic glue injection (EGI): Endoscope (GIF H 180 or 190, Olympus Japan) was stabilised in a position before injection and excessive body movements were avoided, the whole varices were assessed before the injection. Injection was done at the most prominent point or just near to the stigmata of recent haemorrhage using a 21G sclerotherapy needle (Olympus Medical, Japan). Undiluted glue (N-butyl cyanoacrylate 0.5 ml) was loaded in a 2 ml syringe (a large size syringe was avoided) and aliquots of 2 ml syringe was used each time for each injection (maximum volume injected was 10 ml) for any gastric varices (GV) whether primary or rebleeding.

A sclerotherapy needle of size 21G (Olympus Medical) was used with a needle length of at least 6 mm (2 mm for varix, 2 mm for the mucosa and 2 mm for the stomach lumen), the needle was flushed with distilled water to remove the air column from the needle before injecting. After puncture of the varix, injection of the glue was started once a column of blood was seen at the tip of needle catheter. Rescue instruments were ready and kept in stand by mode: these were acetone for flushing the scope channel and clearing the lens, Sengstaken Blakemore tube in case of failure to control bleed, scissors for cutting sclerotherapy needle and goggles for protection of staff and the patient. Continuous air insufflation was used during the injection and suction was avoided for at least 20 seconds after injection. The adequacy of injection was estimated by the probing the varix after injection. If the varix was still soft on probing then reinjection with 2 ml of glue was done. The needle was not primed with heparin and lipidol was not used in both techniques (EGI or EUS guided GV treatment [EUSGVT]).

II: EUS-GVT using coil and glue combination: A linear therapeutic EUS Scope (UCT 180, Olympus Medical) was used for the procedure. For injecting the glue and for placement of coil

access a 19G needle (Cook Medical USA, Boston Scientific - Slimline USA) was used. The coil was MReye[®] embolization coils (Cook Medical USA) with various dimensions and sizes depending upon the size of varix used at the time of the procedure. The glue was same as was used in the endoscopy group (N-butyl cyanoacrylate 0.5 ml per vial). The GV was identified at the lower esophagus, gastric fundus and the anatomy was noted. In condition that patient was fulfilling all the criteria for inclusion and he or she was taken up for a EUS guided coil placement, a transesophageal route was used for puncture of PGC and deployment of coil and glue injection (Fig. 2 and 3). In the fundal GV, fundus was chosen as the site of puncture, coil and glue was injected directly into the GV (Fig. 2).

After puncture with the 19G needle blood was aspirated for confirmation followed by flushing of the needle, then the coil was deployed into the collateral or GV with the coil forming loops in the lumen (it was targeted to occupy half to two third of the lumen with coil and after that the glue was injected). The needle was again flushed to remove the blood inside the tip of the needle and then 2 ml of glue was injected into the collateral. The adequacy was judged by diminishing of blood flow by at least to half within 10 minutes of injection. If the procedure was inadequate then the injection of glue or coil deployment was repeated until the flow stopped.

Follow up endoscopy: A follow up endoscopy and EUS doppler were done at the end of three months of treatment or earlier in case of rebleeding. The variceal treatment was defined as complete if there were no remnant GV on endoscopic examination, hardening of GV on endoscopic examination or no colour flow noted on doppler examination. The treatment was defined as incomplete in case of persistence soft varix on endoscopic examination or persistence of blood flow noted on doppler. In case of incomplete treatment, a repeat injection was done and repeat coil and glue was injected in case of EUS was done initially.