Successful treatment of a giant exposed blood vessel in a gastric ulcer by endoscopic sclerotherapy with N-butyl-2-cyanoacrylate

An 80-year-old man was admitted with hematemesis. Endoscopic examination revealed a deep giant gastric ulcer, and bleeding from the exposed blood vessel was detected in the lesser curvature of the angles of the stomach (Figure 1a). We thought that only the navel-like region in the center of the ulcer (b), but pulsatile bleeding began from the injection point after the needle was removed (c). We decided to use N-butyl-2-cyanoacrylate for sclerotherapy: polymer was observed to form on the surface of the blood vessel and the pulsatile bleeding finally stopped 5 minutes after the injection (d). Follow-up endoscopy indicated that regenerative mucosa was growing around the ulcer and that the ulcer was gradually diminishing in size (e, f).

We decided to use N-butyl-2-cyanoacrylate. Immediately after injecting a small amount of 50% glucose, 0.5 mL of stock solution of N-butyl-2-cyanoacrylate (Histacryl; Aesculap AG & Co., Tuttingen, Germany) was injected into the center of the exposed blood vessel, followed by further injection of a small amount of 50% glucose. The formation of polymer was observed on the surface of the blood vessel and the pulsatile bleeding finally stopped 5 minutes after the injection of N-butyl-2-cyanoacrylate (Figure 1d). Follow-up endoscopy indicated that regenerative mucosa was growing around the ulcer and that the ulcer was gradually diminishing in size (Figure 1e, f).

If the blood vessel had been a real varix, an embolism produced by the moving polymer of N-butyl-2-cyanoacrylate could have arisen after the sclerotherapy [1,2], so we used the stock solution of N-butyl-2-cyanoacrylate without diluting it in lipiodol. The injected N-butyl-2-cyanoacrylate did not appear to move from the surface of the exposed blood vessel. It is therefore sometimes useful to use the stock solution of N-butyl-2-cyanoacrylate for hemostasis of bleeding from a giant exposed blood vessel.

References

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Endoscopy_UCTN_Code_TTT_1AO_2AD