

**Sclerotherapy of Duodenal Varices using a Fibrin Tissue Sealant**

a



b



**Figure 1:** a) The pretherapeutic view, b) the actual view ten months after commencing fibrin sealant injection therapy.

Varices of the esophagus, cardia and, with a lower incidence, the gastric fundus are common manifestations of portal hypertension whereas antral and/or duodenal varices have been only rarely reported (1-4). In contrast to esophageal varices, sclerotherapy with

polidocanol was infrequently used in the stomach and the duodenum as it may cause damage to the intestinal wall. Recently, cyanoacrylate (5,6) and fibrin sealant (7) were reported for the treatment of bleeding fundic varices. After injection of fibrin sealant, fibrin clots lead to a network of rapidly proliferating fibroblasts and collagenous fibers in the mucosa. We describe a thirty-seven-

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year-old patient with minor esophageal but substantial gastric and duodenal varices who presented with recurrent upper GI bleeding (hemoglobin 7.6 g/dl). Only repeated endoscopy identified the prominent duodenal varices as the source of bleeding. Treatment with  $\beta$ -blockers (propranolol, 80 mg/die) and subsequent decompression surgery with a mesocaval shunt (H-shunt) did not prevent rebleeding on medium term follow-up. Bleeding control from the duodenal varices was finally achieved by paravariceal injection of seven aliquots of fibrin sealant during three endoscopic sessions. Neither local or systemic complications nor endoscopically visible inflammation was observed. After the organization of the submucosal fibrin clots the duodenal varices reappeared to some extent but were coated with a thicker mucosal layer (Figure 1). During the ten months following injection therapy no clinical or endoscopic signs of rebleeding have occurred and the hemoglobin level has been stable.

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## References

1. Chen YM, Wu WC, Ott DJ: Antral varices. *Am. J. Gastroenterol.* 1986; 81: 1191–1192.
2. Sauerbruch T, Weinzierl M, Dietrich HP: Sclerotherapy of a Bleeding Duodenal Varix. *Endoscopy* 1982; 14: 187–189.
3. Gertsch Ph, Blumgart LH: Cure of a bleeding duodenal varix by sclerotherapy. *Br. J. Surg.* 1988; 75: 717.
4. Eleftheriadis E: Duodenal Varices after Sclerotherapy for Esophageal Varices. *Am. J. Gastroenterol.* 1988; 43 (4): 439–441.
5. Ramond MJ, Valla D, Mosnier JF et al.: Successful endoscopic obturation of gastric varices with butyl cyanoacrylate. *Hepatology* 1989; 10: 488.
6. Soehendra N, Grimm H, Nam VC et al.: N-Butyl-2-Cyanoacrylate: a supplement to endoscopic sclerotherapy. *Endoscopy* 1987; 19: 221.
7. Friedrichs O: Submuköse Fibrinklebung – Indikationen für ihre Anwendung. *Z. Gastroenterol.* 1991; 29: 453 (abstract).