

## Hemostatic bitherapy for spurting bleeding

**Konstantinos H. Katsanos, Dimitrios E. Sigounas, Dimitrios K. Christodoulou, Epameinondas V. Tsianos**

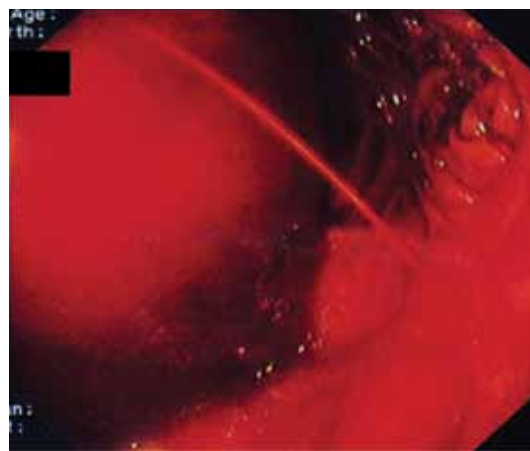
University Hospital of Ioannina, Greece

Endoscopic clipping is an easy and effective technique for the treatment of various bleeding lesions in the upper and lower gastrointestinal tract. Several studies have shown comparable efficacy between clipping and contact thermal therapy for hemostasis of non-variceal upper gastrointestinal hemorrhage. Proficiency in clip application and endoscopic identification of lesions that are amenable to clipping are basic determinants of successful hemostasis [1]. In recent years, endoscopic hemostatic bitherapy (adrenaline injection plus clipping or bipolar coagulation) replaced monotherapy with injection of adrenaline for hemostasis [2].

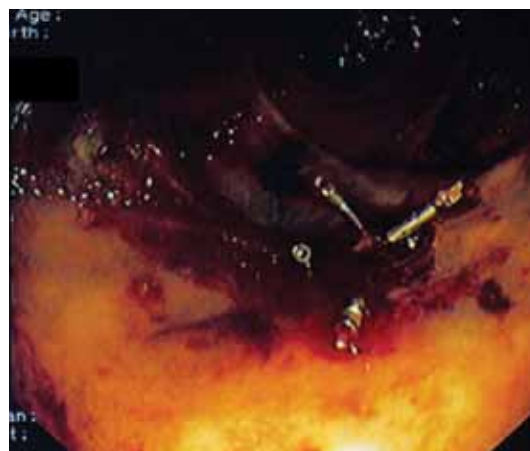
The patient presented herein was scoped on emergency due to massive hematemesis. Patient had a history of Billroth type II operation 20 years ago and no obvious triggering factor for this acute bleeding. On endoscopy a blood jet was identified at the gastrointestinal anastomosis. The bleeding jet was successfully treated with adrenaline injection and clipping (Fig. 1) and the patient recovered smoothly with no need of further intervention.

In spurting bleedings clinical experience shows that multiple clips are frequently necessary and hemostasis may require up to 6 clips for each bleeding location. Various types of hemostatic clips are available. In a study with a reloadable clipping device, on average 5 clips (range 1-6) were used. Sequential application of multiple hemoclips had an increasing effect. Of interest, the number of hemoclips applied correlated inversely, but not significantly, with the endoscopist's experience [3].

A meta-analysis of more than 1,000 patients in 15 studies showed that successful application of hemoclips is superior to injection alone but comparable to thermocoagulation in producing definitive hemostasis. There was no difference in all-cause mortality irrespective of the modalities of endoscopic treatment [4].



A



B

**Figure 1** Spurting bleeding (A) and hemostatic bitherapy (B) in a gastroenteric anastomosis

### References

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1<sup>st</sup> Department of Internal Medicine & Hepato-Gastroenterology Unit, University Hospital of Ioannina, Greece

Conflict of Interest: None

Correspondence to: Prof. Epameinondas V. Tsianos, MD, PhD, AGAF, Professor of Internal Medicine, Department of Internal Medicine, Medical School, University of Ioannina, Leoforos Panepistimiou, 45 110 Ioannina, Greece  
Tel:++30-26510-07501, Fax:++30-26510-07016, e-mail: etsianos@uoi.gr

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