

N-Butyl-2-Cyanoacrylate in the Endoscopic Treatment of Dieulafoy Ulcer

The Dieulafoy ulcer is a submucosal arteriole of the fundus of the stomach that may give rise to massive gastrointestinal hemorrhage (1). A large number of therapeutic options, such as high-frequency coagulation, Nd:YAG laser, endoscopic injection of pharmacological substances, application of tissue adhesive or of hemostatic clips and drugs, have been proposed to achieve hemostasis (2,3). *N*-butyl-2-cyanoacrylate, or bucrylate, is an adhesive substance that polymerizes, almost instantly on contact with the blood, and stimulates the process of scar formation.

A 45-year old man, with no previous history of ulcer, was admitted to our hospital with gastric hemorrhage, hematemesis, and melena. Hemoglobin on admission was 9.0 g/dl. The endoscopic examination revealed a punctiform blood clot adhering to the fundus of the stomach; after this was removed, a small, flat, 2–3 mm ulceration was seen, from which there was active bleeding. A submucosal endoscopic injection of 1 ml of pure bucrylate was carried out at the point of bleeding, resulting in instant hemostasis, and a further 0.5 ml of the same substance was injected in the immediate vicinity for greater safety. The bucrylate polymer, formed in the space of few seconds, blocked the hemorrhage.

At the endoscopic examination one week later, the polymerized bucrylate could be seen being progressively expelled from the site of the ulceration. There were no complications due to the use of pure bucrylate and, after one month, scar formation was observed. During the two-year follow-up, there were no signs of relapse. Endoscopic treatment of Dieulafoy ulcer by submucosal injection with cyanoacrylate may be found to be both safe and effective.

N. D'Imperio, C. Papadia, D. Baroncini, A. Piemontese, P. Billi, P.P. Dal Monte
Gastroenterology Unit, Bellaria Hospital, Bologna, Italy

References

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Figure 1: Endoscopic view of the Dieulafoy ulcer with active bleeding.



Figure 2: Endoscopic view, showing hemostasis immediately after bucrylate injection.

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Corresponding Author

N. D'Imperio, M.D.
Servizio di Gastroenterologia ed Endoscopia Digestiva
Ospedale Bellaria
Via Altura 3
41039 Bologna
Italy