



Is there an alternative therapy to cyanoacrylate injection for safe and effective obliteration of bleeding gastric varices?

Hiroo Imazu, Kuniyuki Kojima, Masahiko Katsumura, Salem Omar

Hiroo Imazu, Department of Endoscopy, Jikei University School of Medicine, Tokyo, Japan

Kuniyuki Kojima, Masahiko Katsumura, Third Department of Internal Medicine, Nara Medical University, Nara, Japan

Salem Omar, Division of Gastroenterology, Department of Medicine, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia

Correspondence to: Dr. Hiroo Imazu, Department of Endoscopy, The Jikei University School of Medicine, 3-25-8 Nishi-shinbashi, Minato-ku, Tokyo 105-8461, Japan. himazu21@aol.com

Telephone: +81-3-34331111 Fax: +81-3-34594524

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TO THE EDITOR

We read with interest the article entitled "Bleeding gastric varices: Results of endoscopic injection with cyanoacrylate at King Chulalongkorn Memorial Hospital" by Noophun *et al*^[1]. They performed n-butyl-2-cyanoacrylate (CA) injection therapy for bleeding gastric varices in twenty-four patients, and hemostasis was achieved in seventeen (71%) patients. They concluded that CA injection therapy was effective and safe for bleeding gastric varices. However, we disagreed with the author's conclusion. Their hemostasis rate was relatively low, and two of the 24 patients developed serious complications as a result of glue embolism. Although CA injection therapy has been accepted as the first line treatment especially in Europe and Asia, hemostasis and obliteration of gastric varices are still a therapeutic challenge and many serious complications as a result of CA injection have been reported^[2]. In addition, there is no reimbursement from the insurance companies in Japan if CA is used for obliterating varices and therefore this therapeutic option is not widely practised there. Although conventional endoscopic injection sclerotherapy using ethanolamine oleate has been reported to be ineffective for bleeding gastric varices^[3], we conducted endoscopic injection sclerotherapy combined

with a vasoactive drug for bleeding gastric fundal varices. We have reported a series of thirty patients with bleeding gastric fundal varices treated with endoscopic injection sclerotherapy using 5% ethanolamine oleate plus infusion of vasopressin^[4]. With our method, continuous injection of 5% ethanolamine oleate mixed with contrast medium through a double lumen catheter was performed under fluoroscopic guidance until it filled the varices and their feeder veins, and thrombin glue was sprayed at the puncture site during withdrawal of the injector needle to prevent bleeding. We have achieved a high rate of hemostasis (93%) with a relatively low rebleeding rate (19%) over follow-up period of up to 5 years without any serious complications^[4]. We would like to recommend our sclerotherapy under fluoroscopic guidance method combined with medical therapy as an alternative to CA injection therapy for bleeding gastric varices, although randomized trials with a larger number of patients are warranted. If CA is to be used, aliquots of 1.0 mL CA per injection must be strictly enforced to prevent any embolic complications. Injections can be repeated if bleeding continues, as long as only 1.0 mL CA is injected each time^[5]. Fluoroscopic guidance might also be useful in minimizing this complication^[6].

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