

Hemoclip for Hemorrhage After Endoscopic Sphincterotomy: An Ultimate Weapon?

Hwai-Jeng Lin

Division of Gastroenterology, Department of Medicine, Taipei Veterans General Hospital and National Yang-Ming University School of Medicine, Taipei, Taiwan, R.O.C.

In the past 2 decades, hemostasis using endoscopic techniques has been a major advance in the treatment of patients with massive peptic ulcer bleeding. It reduces morbidity and mortality and has become the first-line treatment of ulcer hemorrhage.¹

Hemorrhage occurs in 2-12% of patients after endoscopic sphincterotomy (EST).^{2,3} Numerous therapeutic modalities including injection, heater probe, argon plasma coagulation and hemoclip have been applied to achieve hemostasis in these patients.⁴ Due to tangential approach with end-view endoscope in these patients, the bleeding could not be handled easily. So far, there is only one report of hemoclipping in managing such patients.⁵

Lin *et al.* report results of hemoclip therapy in patients with bleeding after EST in this issue.⁶ They performed EST in 162 cases between March 1999 and May 2003. Of these cases, 9 (5.5%) suffered from evident bleeding. Six of them had major bleeding, and 3 needed blood transfusion. All these 9 cases received hemoclip application (median clips: 2). Ultimate hemostatic rate was 89% (8/9). No evident complication was found after hemoclip application. The cause of one failed case was inability to localize the bleeder despite epinephrine injection and H₂O₂ irrigation.

The hemoclip, which was introduced in 1975,⁷ has been used in the past decade for arresting bleeding from peptic ulcers.^{8,9} The hemoclip acts through its mechanical compression of the source of bleeding. Mechanical compression of the bleeding vessel is the most important factor for initial control of bleeding.⁷ In a previous report, the rebleeding rate was low after hemoclip application.¹⁰ The same result was found in Lin's study.⁶ It can be explained by the good technique and usage of a side-view endoscope. The current study being retrospective, therefore, includes some data that may be incomplete. Due to few cases being enrolled in this study, it is impossible to ran-

domize these cases. In the future, hemoclipping needs to be compared with other therapeutic modalities, e.g. heater probe, to prove its effectiveness.

REFERENCES

1. Kubba AK, Palmèr KR. Role of endoscopic injection therapy in the treatment of bleeding ulcer. *Br J Surg* 1996;83:461-8.
2. Leung JW, Chan FK, Sung JJ, Chung S. Endoscopic sphincterotomy-induced hemorrhage: a study of risk factors and the role of epinephrine injection. *Gastrointest Endosc* 1995;42:550-4.
3. Kim HJ, Kim MH, Kim DI, Lee HJ, Myung SJ, Yoo KS, *et al.* Endoscopic hemostasis in sphincterotomy-induced hemorrhage: its efficacy and safety. *Endoscopy* 1999;31:431-6.
4. Lin HJ. Endoscopic therapy for peptic ulcer bleeding. *JAMA(Asia)*, 1996;12:5-6.
5. Baron TH, Norton ID, Herman L. Endoscopic hemoclip placement for post-sphincterotomy bleeding. *Gastrointest Endosc* 2000;52:662.
6. Lin LF, Siau CP, Ho KS, Tung JN. Hemoclip treatment for post-endoscopic sphincterotomy bleeding. *J Chin Med Assoc* 2004;67:496-9.
7. Hayashi T, Yonezawa M, Kuwabara T, Kudoh I. The study on staunch clip for the treatment by endoscopy. *Gastrointest Endosc* 1975;17:92-101.
8. Binmoeller KF, Thonke F, Soehendra N. Endoscopic hemoclip treatment for gastrointestinal bleeding. *Endoscopy* 1993;25:167-70.
9. Ohta S, Yukioka T, Ohta S, Miyagatani Y, Matsuda H, Shimazaki S. Hemostasis with endoscopic hemoclipping for severe gastrointestinal bleeding in critically ill patients. *Am J Gastroenterol* 1996;91:701-4.
10. Lin HJ, Perng CL, Sun IC, TsengGY. Endoscopic hemoclip versus heater probe thermocoagulation plus hypertonic saline-epinephrine injection for peptic ulcer bleeding. *Dig Liver Dis* 2003;35:898-902.