Use of endoclips to close sphincterotomy-related perforation

Fig. 1 A sphincterotomy-related perforation occurred at the 11-o'clock area of the ampulla.

Fig. 2 The first endoclip is deployed through the side-viewing scope.

Fig. 3 Appearance when two endoclips had been placed.

A 26-year-old woman underwent biliary sphincterotomy after a diagnosis of sphincter of Oddi dysfunction. A 3-cm monofilament standard sphincterotome with blended current was used and a zipper cut occurred, causing a tear at the 11-o'clock area of the ampulla (● **Fig. 1** and ● **Video 1**). Fluoroscopy showed a significant amount of free air in the retroperitoneal area. Initially, a gastroscope endoclipping device (HX-5LR-1; Olympus, Tokyo, Japan) and clips (HX-600-090L; Olympus) were deployed through the same side-viewing therapeutic duodenoscope (TJF 160; Olympus). There was marked difficulty in opening, rotating, and closing the clips; the endoscope elevator had to be locked at the open position during the deployment. Two clips were satisfactorily deployed before there was a malfunction of the clip handle (● **Fig. 2** and 3, ● **Videos 1** and 2). The more easily deployed third endoclip was placed using a disposable system (HX-201LR-135; Olympus). Biliary and luminal decompression were achieved endoscopically. A broad spectrum antibiotic was given. The patient was able to resume her diet and all tubes were removed within 10 days. A computed tomography (CT) scan 3 months later showed no evidence of retroperitoneal air.

Most perforations following biliary sphincterotomy can be managed by non-operative methods, including biliary and duodenal drainage [1]. If duodenal closure by surgery is planned, the tear is very difficult to access due to its retroperitoneal location. Hemoclippping has been well accepted for endoscopic control of many gastrointestinal perforations [2,3]. It has been reported that duodenal closure using this technique via the duodenoscope was more difficult than via the

end-viewing scope [4,5]. The limitations are the angle and stress created by the elevator of the scope and this in turn can lead to damage of the endoclippping device. We therefore recommend using a disposable endoclippping device in this situation since it has a slimmer delivery system and is more flexible in manipulation.

Endoscopy_UCTN_Code_TTT_1AR_2AC
Endoscopy_UCTN_Code_TTT_1AR_2AJ

**R. Rerknimitr¹, S. Aekpongpaisit²,
P. Kullavanijaya¹**

¹ Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand

² Department of Gastroenterology, Samitivej Hospital, Bangkok, Thailand

References

- 1 Fatima J, Baron TH, Topazian MD et al. Pancreaticobiliary and duodenal perforations after periampullary endoscopic procedures: diagnosis and management. *Arch Surg* 2007; 142: 448–454
- 2 Sung HY, Kim JI, Cheung DY et al. Successful endoscopic hemoclippping of an esophageal perforation. *Dis Esophagus* 2007; 20: 449–452
- 3 Fujishiro M, Yahagi N, Kakushima N et al. Successful nonsurgical management of perforation complicating endoscopic submucosal dissection of gastrointestinal epithelial neoplasms. *Endoscopy* 2006; 38: 1001–1006
- 4 Baron TH, Gostout CJ, Herman L. Hemoclip repair of a sphincterotomy-induced duodenal perforation. *Gastrointest Endosc* 2000; 52: 566–568
- 5 Katsinelos P, Paroutoglou G, Papaziogas B et al. Treatment of a duodenal perforation secondary to an endoscopic sphincterotomy with clips. *World J Gastroenterol* 2005; 11: 6232–6234

Bibliography

DOI 10.1055/s-2007-995794

Endoscopy 2008; 40: E169

© Georg Thieme Verlag KG Stuttgart · New York · ISSN 0013-726X

Corresponding author

R. Rerknimitr, MD
Faculty of Medicine
Chulalongkorn University
Rama IV
Bangkok 10330
Thailand
Fax: +66-2-2527839
rungsun@pol.net

Video 1

Perforation of the ampulla.

Video 2

Placement of first endoclips through the side-viewing scope (1).
Placement of first endoclips (2).