

Use of endoclips to close sphincterotomy-related perforation

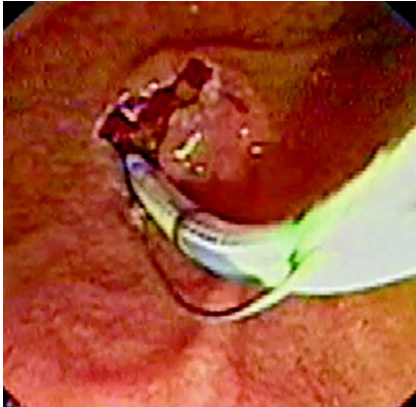


Fig. 1 A sphincterotomy-related perforation occurred at the 11-o'clock area of the ampulla.



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

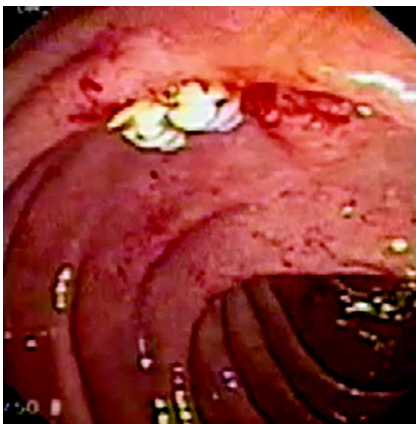


Fig. 3 Appearance when two endoclips had been placed.

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.

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Video 1

Perforation of the ampulla.

Video 2

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

Placement of first endoclips (2).