Hemostasis by Capping Bleeding Diverticulum of the Colon with Clips

A 68-year-old Japanese man presented with massive hematochezia. He had undergone partial colectomy for bleeding diverticulosis of the ascending colon ten years previously. The physical examination showed no abdominal findings. The hemoglobin concentration was 14.4 g/dl, decreasing to 9.8 g/dl the following day. Colonoscopy showed patches of blood clots in the entire colon, and several diverticula in the sigmoid colon. A small amount of fresh blood was escaping from one of these (Figure **1**). Using a clip-fixing device (Olympus HX-5 QR-1), we clipped the orifice of the diverticulum; the bleeding stopped (Figure **2**). The patient's post-treatment course was uneventful. He has been followed up clinically for twelve months, and no rebleeding has occurred.

As many as 20% of patients with colonic diverticula suffer at least one episode of bleeding in their lifetimes; 3% bleed massively, sufficiently to require blood transfusion (1). Hemorrhage almost always occurs in the absence of frank diverticulitis (2), and often stops spontaneously as suddenly as it begins. However, rebleeding occurs in 25% of patients, and of these half have a further recurrence (1). The pathogenesis of the bleeding is asymmetric rupture of the vas rectum, which occurs at the dome of the

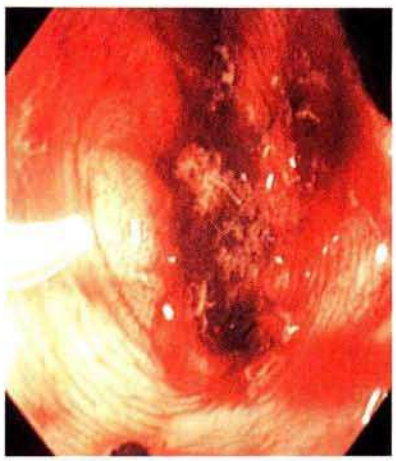

Figure 1: Endoscopic images showing a bleeding diverticulum of the sigmoid colon.

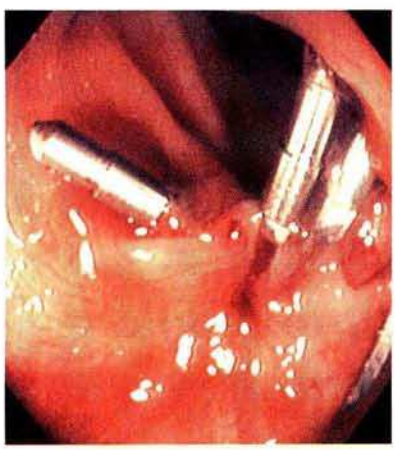

Figure 2: The diverticulum was endoscopically capped using a clipping device.

diverticulum or along its antimesenteric margin near the neck. Rupture of the artery is not circumferential but eccentric, occurring toward the lumen of the diverticulum (2). There has been no effective endoscopic treatment for bleeding gastrointestinal diverticula in most cases (3), although the use of clipping has been reported for various other indications (4). Capping with clips is a new endoscopic therapy, which aims at initial compression hemostasis via a blood clot by closing the diverticulum, and it can be used for hemostasis and prophylaxis of rebleeding. Although further cases will be required to prove the usefulness of the technique, this endoscopic treatment is recommended in cases of a small amount of bleeding or post-treatment bleeding.

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