

A



B

FIGURE 345-22 Endoscopic hemostasis of ulcer bleeding. *A.* Pyloric channel ulcer with visible vessel (*arrow*). *B.* Ulcer hemostasis with placement of an over-the-scope clip.

room or endoscopy suite if they are young, reliable, and otherwise healthy. Flat pigmented spots and adherent clots covering the ulcer base have a 10% and 20% risk of rebleeding, respectively. Endoscopic therapy is often considered for an ulcer with an adherent clot. When a fibrin plug is seen protruding from a vessel wall in the base of an ulcer (so-called sentinel clot or visible vessel), the risk of rebleeding from the ulcer is 40%. This finding generally leads to endoscopic therapy to decrease the rebleeding rate. Occasionally, active spurting from an ulcer is seen, with >90% risk of ongoing bleeding without therapy.

Endoscopic therapy of ulcers with high-risk stigmata typically lowers the rebleeding rate to 5–10%. Several hemostatic techniques are available, including injection of epinephrine or a sclerosant into and around the vessel, “coaptive coagulation” of the vessel in the base of the ulcer using a thermal probe that is pressed against the site of bleeding, placement of hemoclips (**Fig. 345-22**), or a combination of these modalities (**see Video 346e-8**). In conjunction with endoscopic therapy, the administration of a proton pump inhibitor decreases the risk of rebleeding and improves patient outcome.

Varices Two complementary strategies guide therapy of bleeding varices: local treatment of the bleeding varices and treatment of the underlying portal hypertension. Local therapies, including endoscopic variceal band ligation, endoscopic variceal sclerotherapy, and balloon tamponade with a Sengstaken-Blakemore tube, effectively control acute hemorrhage in most patients, although therapies that decrease portal pressure (pharmacologic treatment, surgical shunts, or radiologically placed intrahepatic portosystemic shunts) also play an important role.

Endoscopic variceal ligation (EVL) is indicated for the prevention of a first bleed (primary prophylaxis) from large esophageal varices (**Figs. 345-23 and 24**), particularly in patients in whom beta blockers are contraindicated or not tolerated. EVL is also the preferred endoscopic

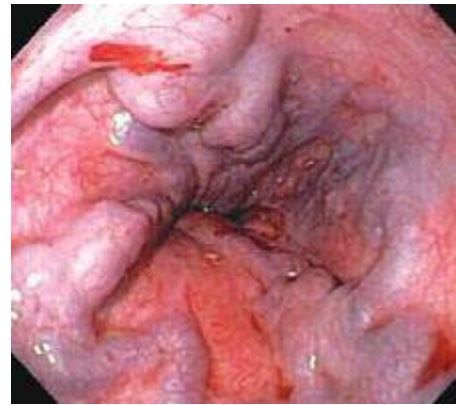


FIGURE 345-23 Esophageal varices.

therapy for control of active esophageal variceal bleeding and for subsequent eradication of esophageal varices (secondary prophylaxis). During EVL, a varix is suctioned into a cap fitted on the end of the endoscope, and a rubber band is released from the cap, ligating the varix (**Fig. 345-24**, **see Video 346e-9**). EVL controls acute hemorrhage in up to 90% of patients. Complications of EVL, such as postbanding ulcer bleeding and esophageal stenosis, are uncommon. Endoscopic variceal sclerotherapy (EVS) involves the injection of a sclerosing, thrombogenic solution into or next to esophageal varices. EVS also controls acute hemorrhage in most patients, but it is generally used as salvage therapy when band ligation fails because of its higher complication rate compared to EVL. These techniques are used when varices are actively bleeding during endoscopy or (more commonly) when



A



B

FIGURE 345-24 Endoscopic band ligation of esophageal varices. *A.* Large esophageal varices with stigmata of recent bleeding. *B.* Band ligation of varices.