Complications include renal failure, hematoma, ischemia, and infarction. Provocative testing using anticoagulants (e.g., intravenous heparin and intra-arterial tissue plasminogen activator) to promote bleeding and vasodilators (intra-arterial tolazoline) can increase diagnostic yield, although there is a concern for significant complications, including death. Additional studies are necessary to optimize the efficacy and prove the safety of this approach.

Multidetector-Row Computed Tomography

Multidetector-row computed tomography (MDCT) can detect bleeding rates of 0.3 mL/min and incorporates several computed tomography (CT) improvements, which allow enhanced delineation of mesenteric vessels: faster scanning time, more accurate acquisition of images in arterial and venous phases, and improved 3-dimensional display. Patients do not ingest any water or contrast material orally, and after an initial unenhanced CT scan, images are obtained during the arterial phase to identify extravasation of contrast into the bowel lumen. Studies demonstrate 91% to 92% sensitivity and near 100% specificity for detecting the source of acute GI bleeding with MDCT and 100% accuracy in localization of the bleeding site. Although MDCT is promising, additional studies are needed to determine the optimal role of MDCT in lower GI bleeding.

Differential Diagnosis

The differential diagnosis of acute lower GI bleeding is broad, although the vast majority of cases result from diverticulosis, ischemic colitis, angiodysplasias, neoplasia, and hemorrhoids (Table 11-1). Despite evaluation, the cause of lower GI bleeding may go undetected in approximately 12% of cases.10,11

Diverticulosis

Diverticulosis is the most common cause of significant lower GI bleeding. It is more prevalent in developed countries and older patients. Diverticulosis occurs in 5% to 10% of people younger than 40 years compared with more than half of people older than 80 years.