Anorectal bleeding: etiology, evaluation, and management (with videos)

Sumanth R. Daram, MD,[1] Christopher Lahr, MD,[2] Shou-jiang Tang, MD[1]

Rectal bleeding has been reported to be the sixth most common symptom prompting an outpatient clinic visit.[1] Anorectal causes account for from 3% to 10% of patients presenting with hematochezia.[2-4] In a study that used artificial neural networks, 12.5% of patients with acute lower GI bleeding had an anorectal etiology.[5] The true incidence and prevalence of rectal bleeding are unknown. Community-based surveys indicate a 13% to 20% prevalence of rectal bleeding.[6-9] Only about 14% to 31% of such patients seek medical attention.[6,7,10] Most patients reporting rectal bleeding are aged under 50 years.[7,8] Mortality from lower GI bleeding (0.6%) is significantly lower than that from upper GI bleeding (2%).[11] However, outcomes data for anorectal causes of bleeding are unavailable.

Search strategy

We searched PubMed, Medline, Ovid Medline, and the Cochrane Controlled Trial Register for relevant articles that used the search terms *anorectal bleeding, rectal bleeding, anal bleeding, lower gastrointestinal bleeding, hemorrhoids, anal fissure, rectal varices, solitary rectal ulcer, solitary rectal ulcer syndrome, mucosal prolapse syndrome, ulcerative proctitis, ischemic proctitis, chronic radiation proctopathy, radiation proctitis, acute hemorrhagic rectal ulcer, stercoral ulcer,* and *anorectal pathology.*

Abbreviations: APC, argon plasma coagulation; 5-ASA, 5-aminosalicylic acid; CRC, colorectal cancer; RBL, rubber band ligation; RFA, radiofrequency ablation.

DISCLOSURE: *All authors disclosed no financial relationships relevant to this publication.*

See CME section; p. 396.

Use your mobile device to scan this QR code and watch the author interview. Download a free QR code scanner by searching 'QR Scanner' in your mobile device's app store.

0016-5107/$36.00
http://dx.doi.org/10.1016/j.gie.2012.03.178

Risk of colorectal cancer

Anorectal bleeding presents a clinical dilemma in terms of associated risk of colorectal cancer (CRC). The estimated risk of CRC in patients with rectal bleeding has been reported to range from 2.4% to 11%.[12] The utility of anorectal bleeding to predict the risk of CRC remains controversial.[13-15] Further, it is unclear as to the extent of proximal evaluation needed in patients with a definitive anorectal etiology for rectal bleeding. In 115 patients who underwent colonoscopy for rectal bleeding, only 1 case of adenoma proximal to the splenic flexure was found.[16] In patients with bright red rectal bleeding, 95% of 2200 patients had an etiology distal to the splenic flexure.[17] Some authors recommend colonoscopy for all patients with rectal bleeding, citing the high diagnostic yield of abnormal findings, including neoplasms.[18-21] Younger patients without a history suggestive of proximal colon pathology and/or family history of CRC may require only a flexible sigmoidoscopy.[22,23] In older patients and those with a family history of CRC, colonoscopy may be the more cost-effective strategy.[24,25]

Anatomy and vascular supply of the rectum and anal canal

The anus is the outlet to the GI tract, and the rectum is the lower 10 cm to 15 cm of the large intestine. The anal canal is roughly 4 to 5 cm in length in an adult; therefore, most anal pathologies can be detected on digital examination and by anoscopy. The arterial supply and venous drainage of the rectum and anal canal is depicted in Figure 1. There is an extensive intramural anastamotic network between the superior, middle, and inferior rectal arteries. Rectal ischemia is therefore a relatively rare occurrence.[26] Venous drainage occurs into both the systemic and portal circulation. Rectal varices can thus arise from portosystemic shunting in the rectum.[26]

Hemorrhoidal cushions. There are 3 submucosal cushions composed of sinusoids, within the connective tissue, at the left lateral, right anterior, and right posterior positions. The term *hemorrhoid* is used to describe the downward displacement of these cushions along with associated sinusoidal dilation.[27]

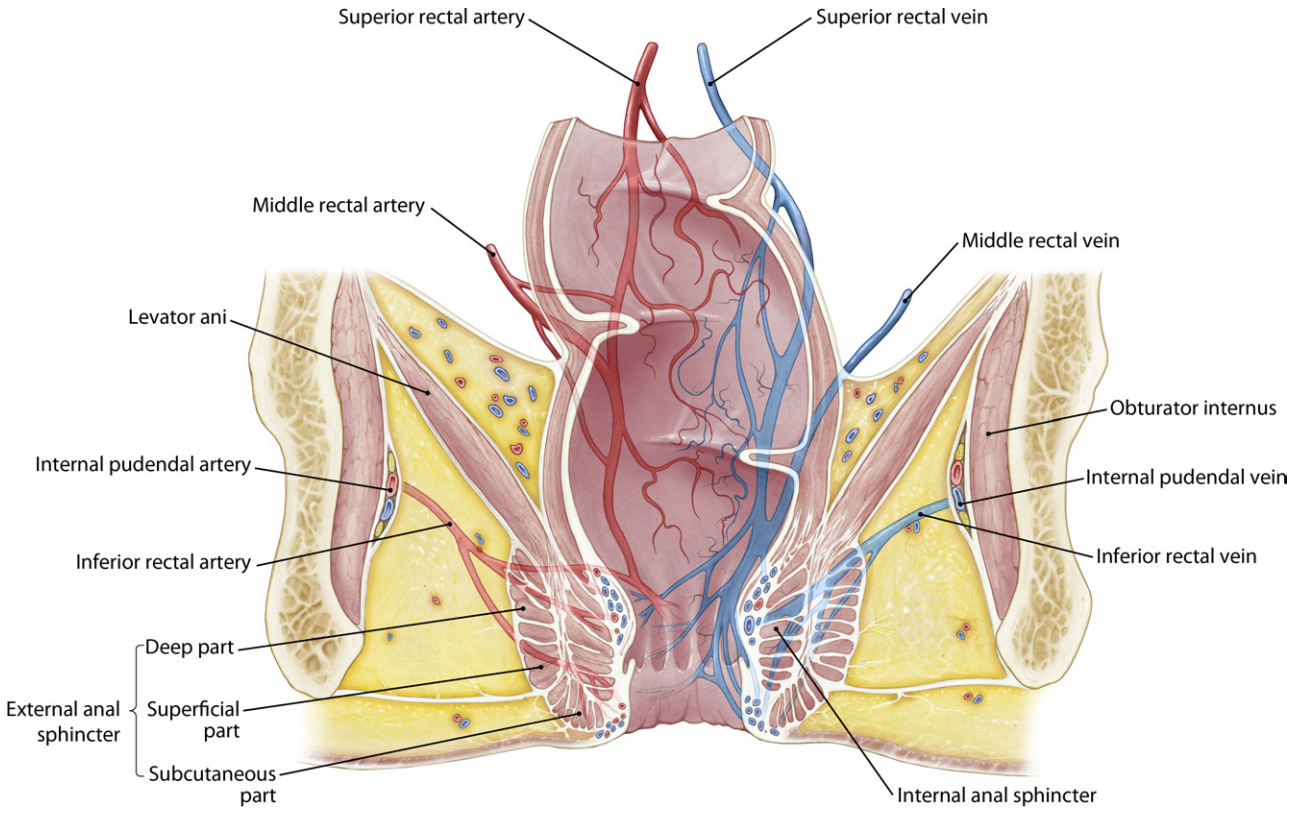

Figure 1. Vascular supply of the anal canal and rectum.

Examination and evaluation of the anal canal and rectum

Assessment of a patient with rectal bleeding consists of inspection, palpation, and examination with the aid of instruments. Inspection alone can reveal fissures, a sentinel pile (at the inferior margin of a chronic fissure), an external fistulous opening, perianal dermatitis, masses, thrombosed hemorrhoids, rectal prolapse, or condyloma (Video 1 and all 22 videos in this article are available online at www.giejournal.org).

Examination of the anal canal with an anoscope can access the entire anal canal and the most distal part of the rectum (Video 2). Rectal examination requires a sigmoidoscope. A smaller plastic anoscope can be used as an adjunct with a flexible endoscope for anorectal examination (Video 3). In addition to these methods of examination, cinedefecography can aid in the diagnosis of internal rectal prolapse, intussusception, or enterocele (Fig. 2; Video 4). Anorectal manometry and a balloon expulsion test can help identify pelvic floor disorders.

Anesthesia. In this paragraph, we describe anesthesia used in our practice in the evaluation of anorectal bleeding lesions. Most patients do not require analgesia for digital rectal examination and anoscopy. Lidocaine jelly 2% may be inserted into the anal canal 5 minutes before insertion of the anoscope. In addition, the anoscope should be generously lubricated with standard lubricating jelly or lidocaine jelly. In patients who do not tolerate anoscopy despite topical medications, such as those with acute anal fissure, intravenous procedural sedation with opioids, benzodiazepines, or propofol should be considered. We use lidocaine 1% with epinephrine (1:10,000) for excision of a clot from a thrombosed external hemorrhoid. We use standard proce-

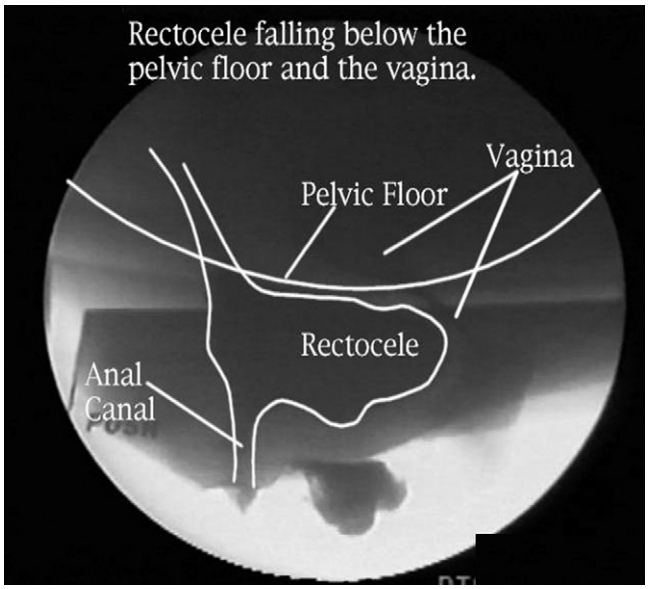

Figure 2. Fluoroscopic image at defecography demonstrating a rectocele.