

LOWER G.I. BLEEDING - 1

Introduction

- Occult, Overt, or Hemorrhagic
- Defined as intestinal bleeding distal to the ligament of Treitz
- Only 1/4th or 1/5th of intestinal bleeding is lower...Upper GI bleeding is more common
- Annual incidence is 25 per 100,000 adult patients
- Bleeding stops spontaneously in 80-85% of patients with 25% rebleeding
- From age 30 to 90 your risk increases 200 fold
- Because of increased incidence of diverticular disease and angiodysplasia
- A source is located 50-80% of the time

Causes

- Please see attached tables

Evaluation and Resuscitation

- History including bowel habits, association with pain, NSAIDS/ASA/Coumadin
- Physical Exam including digital rectal exam and character of blood per rectum: fresh, old, clots?
- Obvious anorectal source?
- Large bore IV, NG tube, CBC, T&S, PT/PTT
- Transfusion/Vitamin K/FFP/DDAVP

Differentiate, Localize, and Nonsurgical Treatment - Begin referring to flow charts

- Evaluate UGI with NG tube and endoscopy
- Consider reevaluation of anorectum with rigid anoscope/sigmoidoscope
- **Red blood cell scan**
 - Useful if no obvious upper or anorectal source is found
 - Noninvasive but with no therapeutic benefit
 - Not without false positives and negatives
 - Can see bleeding as slow as 0.1ml/min
 - Can be repeated early and often, as well as at 12-24 hours
 - At best this test can tell you right from left or upper from lower
 - At worst it can lead to the inadequate, non-therapeutic bowel resection
 - Series report correct localization in 23-97% of patients
 - **Best used to guide the use of angiography, diagnostic or therapeutic.**
- **Angiography**
 - Useful when bleeding is vigorous or previously localized by red blood cell scan
 - Detects bleeding as a blush when **2ml/min or greater**
 - Relatively invasive
 - Should catheterize all 3 mesenteric vessels
 - May use vasopressin injection but should be careful about embolizing

- A-V malformations do not respond well to vasopressin
- Angiography diagnostic in 50-80% of patients in 2 recent studies
- In both of these series vasopressin was used successfully 50% of the time
- Complication rates 5-15%

- **Colonoscopy**
 - Diagnostic and therapeutic technique of choice
 - Some recommend to perform within 12 hours of presentation
 - Patient needs to be stabilized
 - Adequate prep essential
 - Most useful when source is AVM or diverticular disease
 - Studies show that in about 75% of cases colonoscopy identifies source
 - Therapeutic colonoscopy is also very promising as described in recent study summarized in the attached table.

- **Surgical Therapy**
 - Known source that failed other forms of therapy requiring 10 U PRBC's over 48 hours
 - Unknown source that failed other terms of therapy requiring 10 U PRBC's over 48 hours
 - The unstable patient who failed RBC scan and angiography - source localized
 - The unstable patient who failed RBC scan and angiography - source not localized

TABLE 1 -- CAUSES OF GASTROINTESTINAL BLEEDING

Common causes

- Upper GI sources (10% - 15%)
 - Gastric or duodenal ulcers
 - Gastritis
- Small bowel sources (10% - 25%)
 - Meckel's diverticulum or other diverticula
 - Vasculitis
 - Ulcers
- Colonic sources (50% - 75%)
 - Arteriovenous malformations, angiodysplasia
 - Diverticula
 - Neoplasms
 - Inflammatory bowel disease
 - Hemorrhoids

Less common causes

- Solitary rectal ulcer syndrome
- Colonic varices in portal hypertension
- Mesenteric ischemia
- Aortoenteric fistula
- Endometriosis
- Radiation enteritis
- Intussusception
- Diversion colitis
- Coagulopathy
- Lesions associated with use of aspirin or NSAIDS
- Infectious colitides/enteritides: Enteropathogenic
- *Escherichia coli*, amebiasis, others

TABLE 2 -- COMMON CAUSES OF MASSIVE LOWER GASTROINTESTINAL BLEEDING BY AGE

Adapted from Murray J: Lower gastrointestinal tract bleeding. In Mazier WP, Levien DH, Luchtefeld MA, et al (eds): Surgery of the Colon, Rectum, and Anus. Philadelphia, WB Saunders, 1994, p 763.

Adolescents and young adults

- Meckel's diverticulum
- Inflammatory bowel disease
- Polyps

Adults older than 60 years

- Angiodysplasia
- Diverticula
- Neoplasms

Adults to 60 years of age

- Diverticula
- Inflammatory bowel disease
- Neoplasms

TABLE 3. OUTCOME OF TREATMENT FOR DIVERTICULAR HEMORRHAGE.

VARIABLE	MEDICAL AND SURGICAL TREATMENT (N=17)	MEDICAL AND COLONOSCOPIC TREATMENT (N=10)	P VALUE
Endoscopic hemostasis — no. (%)	0	10 (100)	0.001
Additional bleeding — no. (%)*	9 (53)	0	0.005
Severe bleeding — no. (%)†	6 (35)	0	0.03
Emergency hemicolectomy — no. (%)	6 (35)	0	0.03
Median time to discharge after colonoscopy — days	5	2	<0.001
Complications — no. (%)	2 (12)‡	0	0.26
Late bleeding — no. (%)	0	0	1.0
Follow-up — mo			
Median	36	30	
Range	24–54	18–49	

*Additional bleeding was defined as self-limited or recurrent hematochezia that occurred after purging of the colon and colonoscopy and that required no more than an additional 2 units of packed red cells.

†Severe bleeding was defined as continued or recurrent hematochezia that required at least 3 units of packed red cells.

‡One patient had pneumonia, and one had a wound infection.

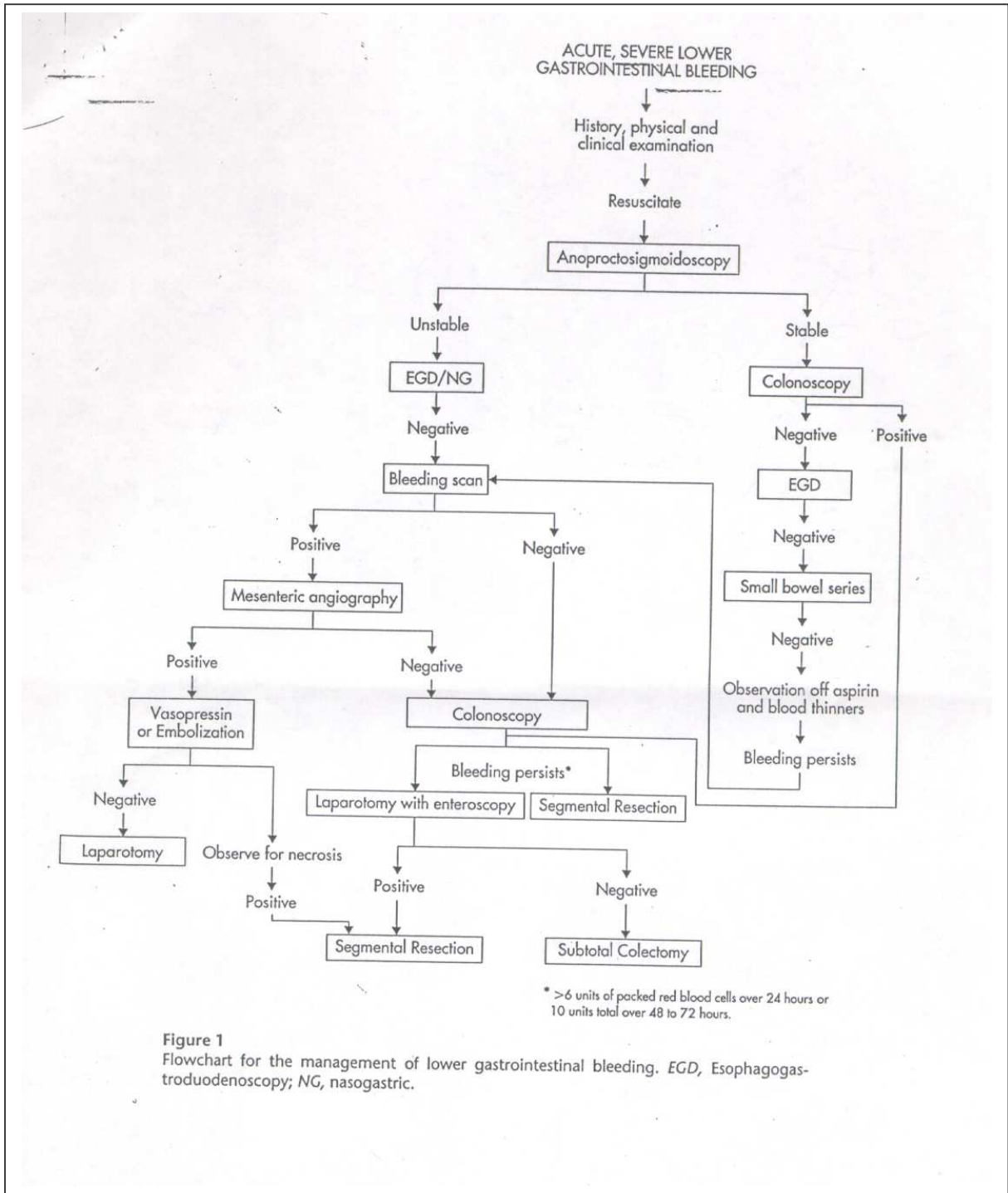


Figure 1
Flowchart for the management of lower gastrointestinal bleeding. EGD, Esophagogastroduodenoscopy; NG, nasogastric.

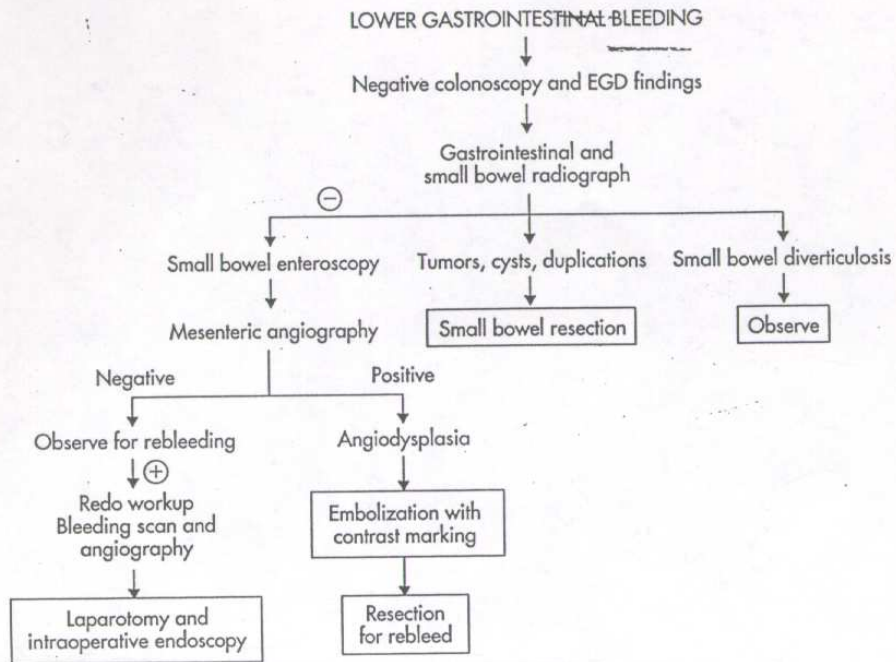


Figure 2
Flowchart for management of midgut sources of lower gastrointestinal bleeding. EGD, Esophagogastroduodenoscopy.