

bleeding per rectum

By Dr. Ajit Jadhav

**Associate professor,
Department of Gen. Surgery**

DEFINITIONS

- **Rectal bleeding**
- A symptom of a problem in the GI tract. It means any blood passed rectally ; consequently, the blood may come from **any** area or structure in the GI tract that allows blood to leak into the GI lumen.
- **LOWER GI HEMORRHAGE**
- an abnormal intraluminal blood loss from a source distal to the **Treitz ligamentum**.

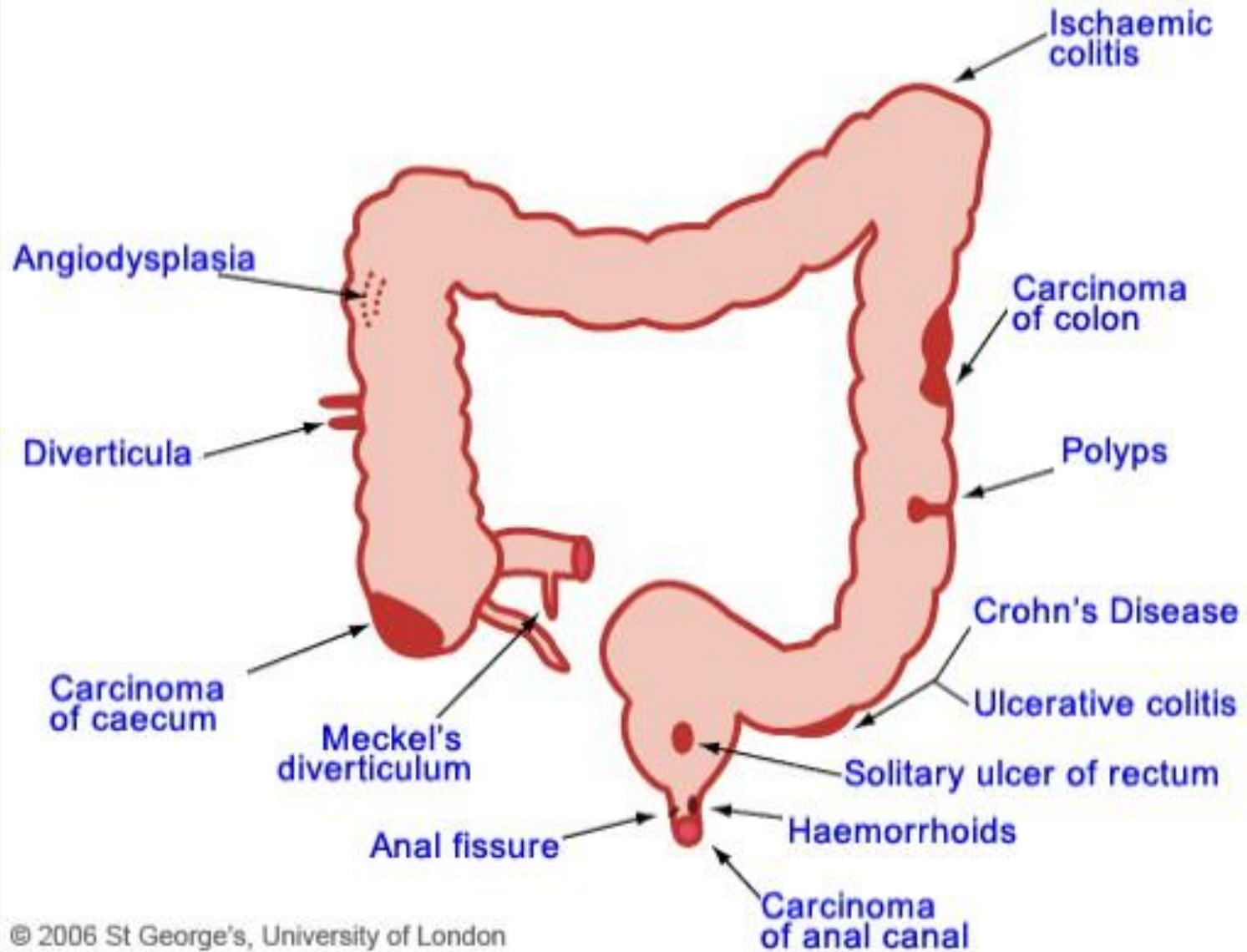
Causes of rectal bleeding

	Causes	Frequency
Colorectal (80%)	Diverticular disease	5.2-42%
	Angiodysplasia	1.2-4%
	Neoplasm	2.9.19%
	Inflammatory bowel disease	
	Ischemic colitis	7-18%
	Infectious colitis	2.6%
	Radiation proctitis	9-13%
	Anorectal disease (haemorrhoids, fissurae)	20%
	Post-polypectomy/post-anastomotic bleeding	0-12.8%
Small bowel source (10%)	AV malformations	
	Meckel diverticulum	
	IBD	
	Neoplasia	
UGI source (10%)	Vasculitis	
	Ulcer	
	Neoplasm	

General causes

Bleeding disorders. e.g. hemophilia, thrombocytopenia.

Drugs: anticoagulant therapy



LOWER GI HEMORRHAGE IN ADULTS	PERCENTAGE OF PATIENTS
<u>Diverticular disease</u> - <u>Diverticulosis</u> /diverticulitis of small intestine -Diverticulosis/ <u>diverticulitis of colon</u>	60%
<u>IBD</u> - <u>Crohn's disease</u> of small bowel, colon, or both - <u>Ulcerative colitis</u> -Noninfectious gastroenteritis and colitis	13%
<u>Benign anorectal diseases</u> - <u>Hemorrhoids</u> - <u>Anal fissure</u> - <u>Fistula-in-ano</u>	11%
<u>Neoplasia</u> -Malignant neoplasia of small intestine -Malignant neoplasia of colon, rectum, and anus	9%
Coagulopathy	4%
Arteriovenous malformations (AVM)	3%

LOWER GI BLEEDING

```
graph TD; A[LOWER GI BLEEDING] --> B[MASSIVE BLEEDING]; A --> C[MODERATE BLEEDING]; A --> D[OCCULT BLEEDING];
```

MASSIVE BLEEDING

1. Patients > 65 years of age with multiple medical problems
2. Present as a hematochezia or bright red blood per rectum.
3. Hemodynamically unstable
 - SBP = 90 mmHg
 - HR > 100/min
 - Low urine output
4. Hemoglobin level = 6 g/dl
5. Most commonly due to
 - Diverticulosis
 - Angiodysplasias
6. Mortality rate may be as high as 21%.

MODERATE BLEEDING

1. Patients with any age.
2. May present as hematochezia or melena.
3. Hemodynamically stable patients.
4. Long list of diseases including benign anorectal, congenital, inflammatory, and neoplastic diseases may cause moderate amount of acute or chronic bleeding.

OCCULT BLEEDING

1. Patients with any age.
2. Patients present with microcytic hypochromic anemia due to chronic blood loss.
3. Long list of diseases including congenital, inflammatory, and neoplastic diseases may cause chronic occult bleeding.

MASSIVE LOWER GI BLEEDING

- Passage of a large volume of red or maroon blood through the rectum
- Hemodynamic instability and shock(**Systolic blood pressure of less than 90 mm Hg**)
- Initial decrease in hematocrit level of 6 g/dL or less
- Transfusion of at least 2 units of packed red blood cells
- Bleeding that continues for 3 days
- Significant rebleeding in 1 week

management

- in cases of massive bleeding:
 - Admit to hospital. ICU admission.
 - Insert two peripheral venous lines and withdraw blood for cross matching and blood tests.
 - Insert a Foley catheter.
 - A central venous line is needed for monitoring in severe cases.
 - Ryle tube.
 - IV fluids are started until blood is available e.g., Ringer's lactate.
 - Correct coagulopathy by FFP and by giving missing factors : empiric blood to blood product ratios such as 1 :1 :1 to correct coagulopathy

HISTORY

PAIN AND BLEEDING:

Fissures

PAIN, LUMP AND BLEEDING:

Prolapsed haemorrhoids

Carcinoma of the anal canal

Prolapsed rectal polyp or carcinoma

Prolapsed rectum

- **DIAGNOSIS OF CONDITIONS PRESENTING WITH RECTAL BLEEDING BUT **NO PAIN**:**

Blood mixed with stool - **colon carcinoma**

Blood streak on stool-**rectal carcinoma**

Blood after defaecation- **haemorrhoids**

Blood and mucus-**colitis**

Blood alone-**diverticular disease**

Melaena-**peptic ulcer**

TABLE 1: Classic Presentations of Lower Gastrointestinal Bleeding

Pathologic Condition	Classic Presentation	Origin
External hemorrhoid	Painful, sporadic low volume bleeds with red blood coating stool	Anal canal below pectinate line
Internal hemorrhoid	Painless, sporadic low-volume bleeds with red blood coating stool	Anal canal above pectinate line
Anal fissure	Tearing pain and bleeding with defecation	Anal canal
Diverticular bleeding	Painless or associated with mild cramping. Episodic bursts of arterial bleeding, high volume blood loss and passage of clots are possible. Increased prevalence in the elderly and with NSAID use	Right or left colon
Angiodysplasia	Painless or associated with mild cramping. Episodic venous bleeding, overt or occult bleeding are possible, often at low volume (but can be massive). Increased prevalence in the elderly	Often right colonic or cecal origin
Colon cancer	Cramping or painless hematochezia or melena with iron deficiency anemia. Increased risk with weight loss and positive family history	Left colon: hematochezia Right colon: occult bleeding, anemia

HISTORY

HISTORY TAKING

PREVIOUS HISTORY

- ▶ Previous perianal disease
- ▶ Inflammatory bowel disease
- ▶ Peptic ulcer disease
- ▶ Liver disease
- ▶ Coagulopathy

FAMILY HISTORY

- History of malignancy
- Familial Adenomatous Polyposis

DRUGS HISTORY

- Laxative agent
- Anti-parkinson agent
- Anti-coagulant therapy eg: warfarin
- NSAID's-risk factor of PUD

SOCIAL HISTORY

- Low fiber diet
- Smoking

EXAMINATION

- **Abdominal examination** may reveal the presence of a mass e.g., cancer sigmoid
- **DRE may reveal:**
Carcinoma of rectum

INVESTIGATION

- Check that the patient doesn't **have upper Git bleeding** by passing nasogastric tube or by upper endoscopy.
- **Laboratory tests:**
 - Hemoglobin percent and hematocrite
 - Stools examination may reveal bilharzial ova or trophozoites of amoebiasis.
 - Blood urea and creatinine.
 - Exclude causes of generalized bleeding tendency by the coagulation tests.
- **Proctoscopy** will reveal internal haemorrhoids.
- **Sigmoidoscopy.**
- **Colonoscopy:**

- **Isotope scans:**

The patient's own RBCs are tagged with ^{99m}Tc and then injected intravenously.

Abdominal scanning by a gamma camera can identify the site of bleeding.

- **Angiography:**

This invasive investigation is performed when colonoscopy cannot be performed because of massive bleeding or when colonoscopy cannot pinpoint the source of bleeding e.g in angiomatous malformations of the colon.

- **Contrast radiology:**

Double contrast barium

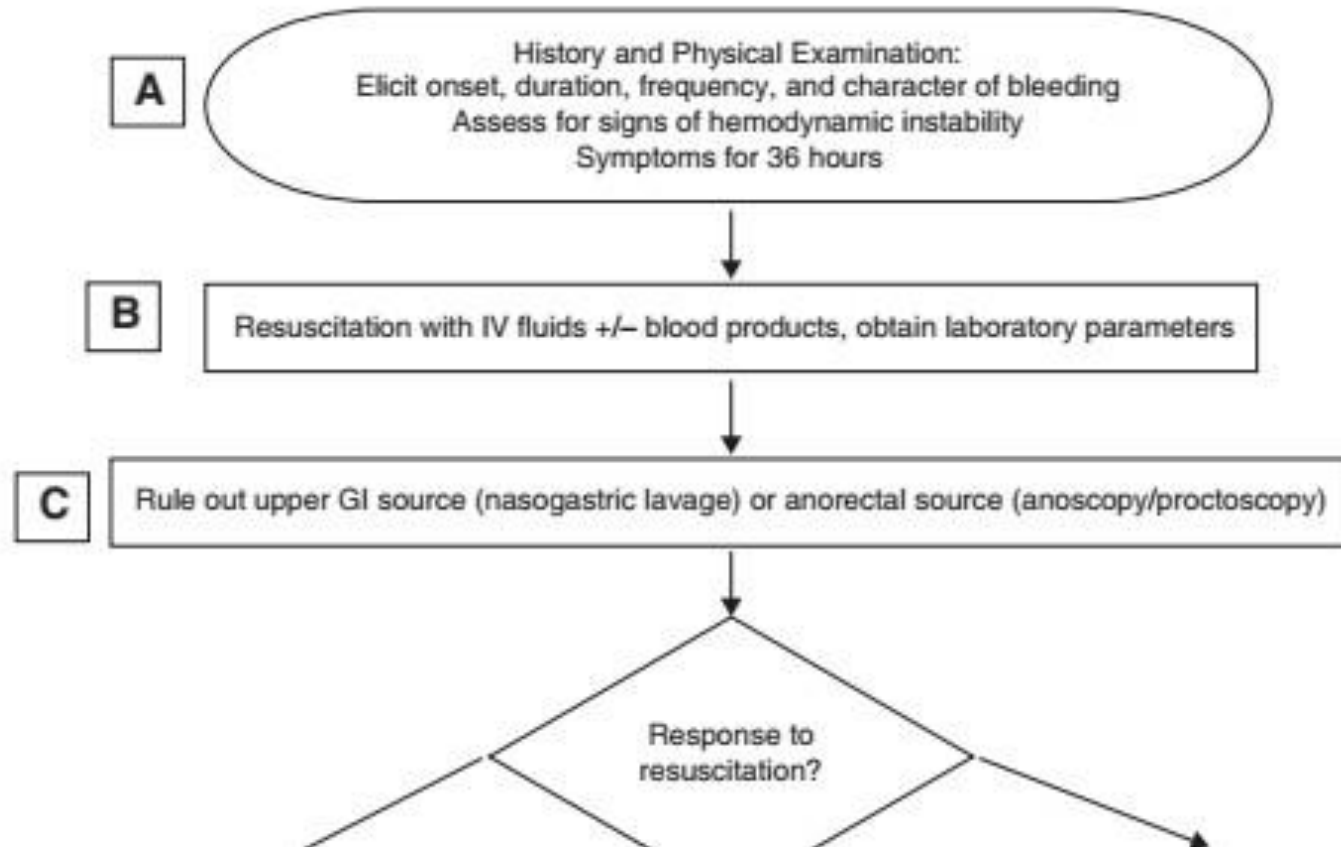
- **Laparotomy:**

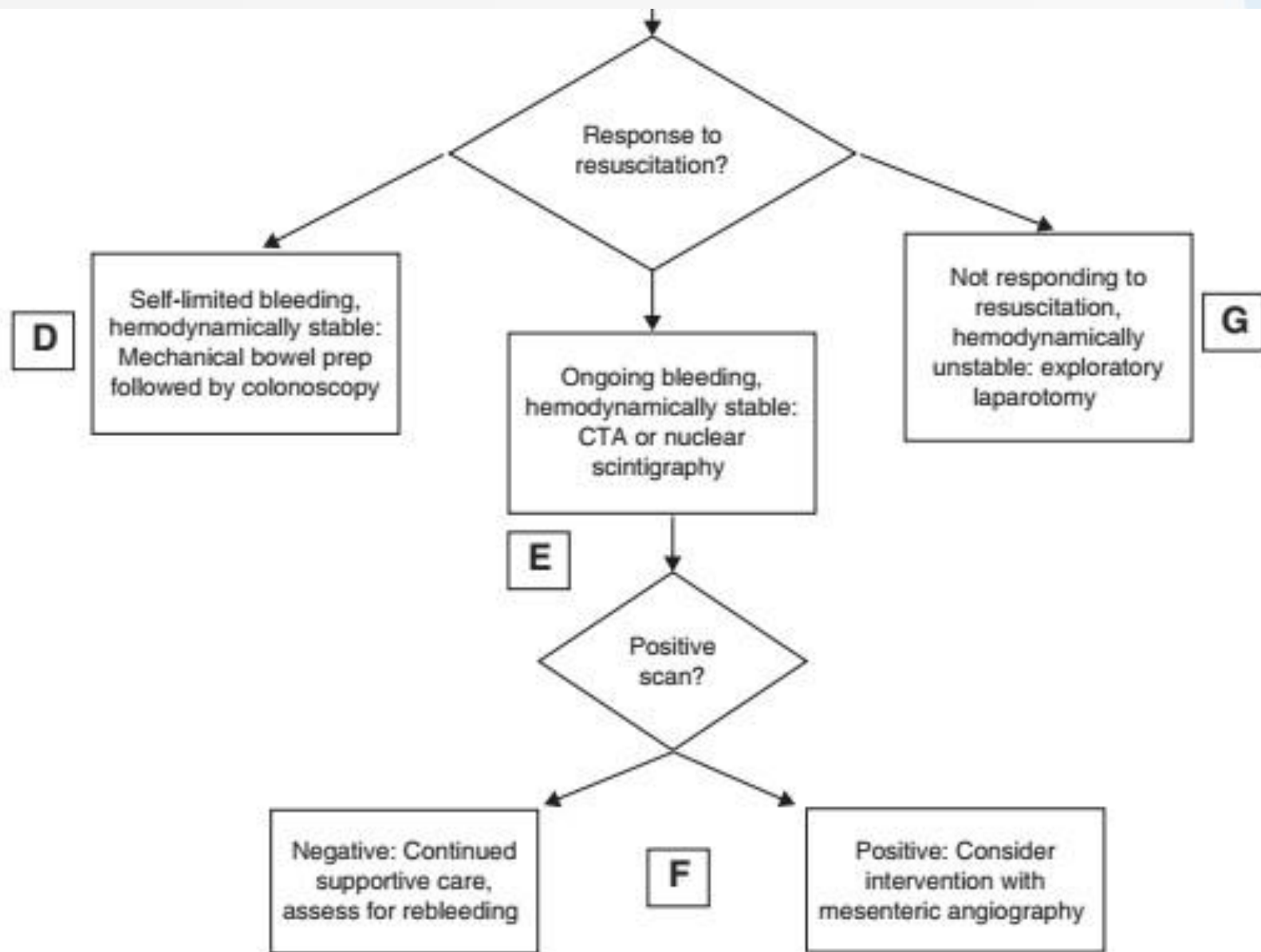
If all the previous investigations are not available ,or failed

TABLE 2: Summary of Tests for Evaluation of the Large Intestine

Test	Therapeutic Utility	Active Bleeding During Test Required	Evaluates Small Intestine	Notes
Colonoscopy	+	–	–	Efficacy decreases if hemorrhage is massive or bowel prep inadequate
Angiography	+	+	+	Efficacy increases if hemorrhage is massive
Computed tomography angiography	–	+	+	Accurately localizes many bleeds and can be performed quickly
Scintigraphy	–	–	+	High sensitivity localization accuracy is suboptimal if scans are infrequent

management





TREATMENT

- **MINOR BLEEDING**

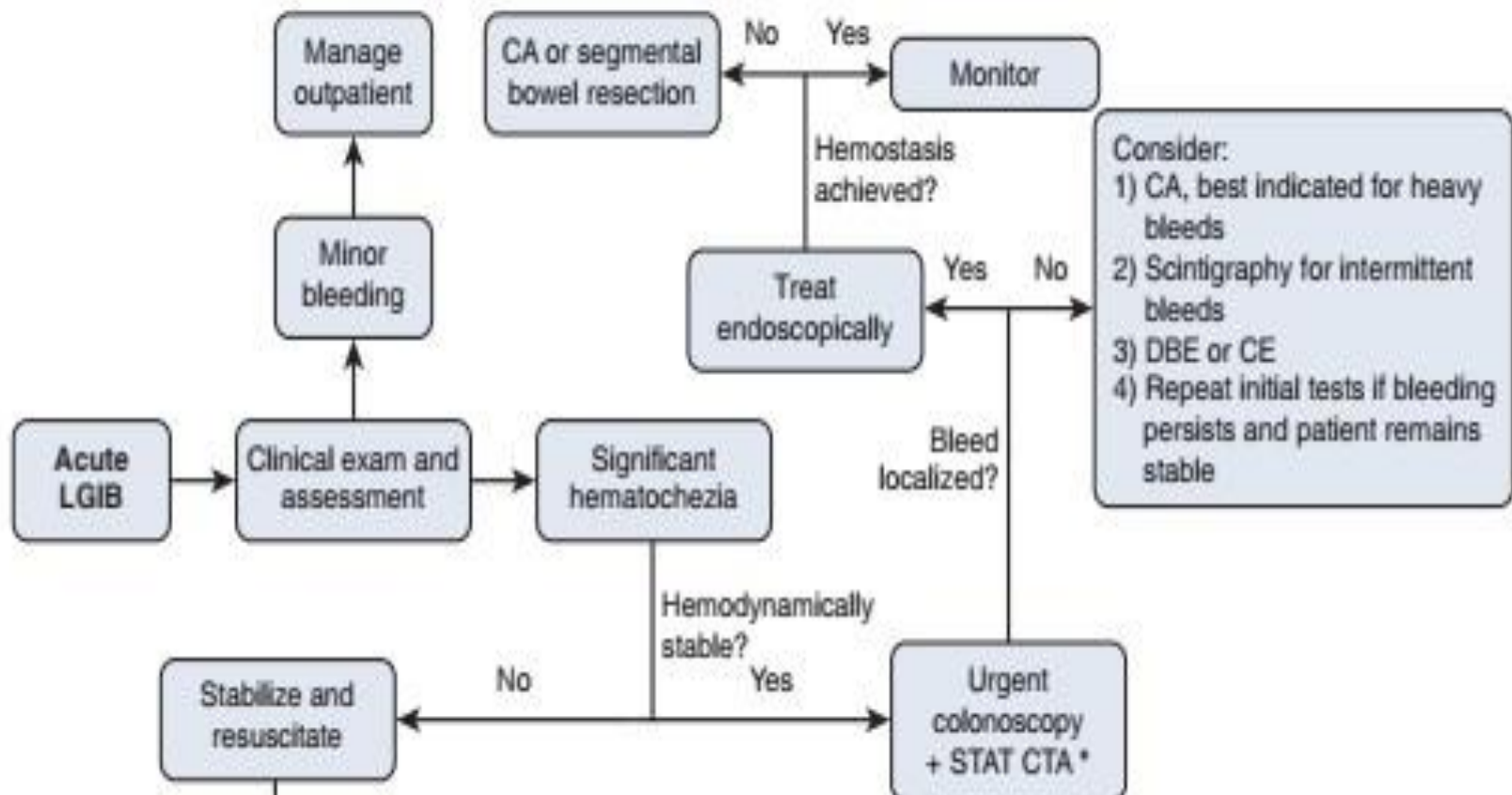
Is treated on elective basis.

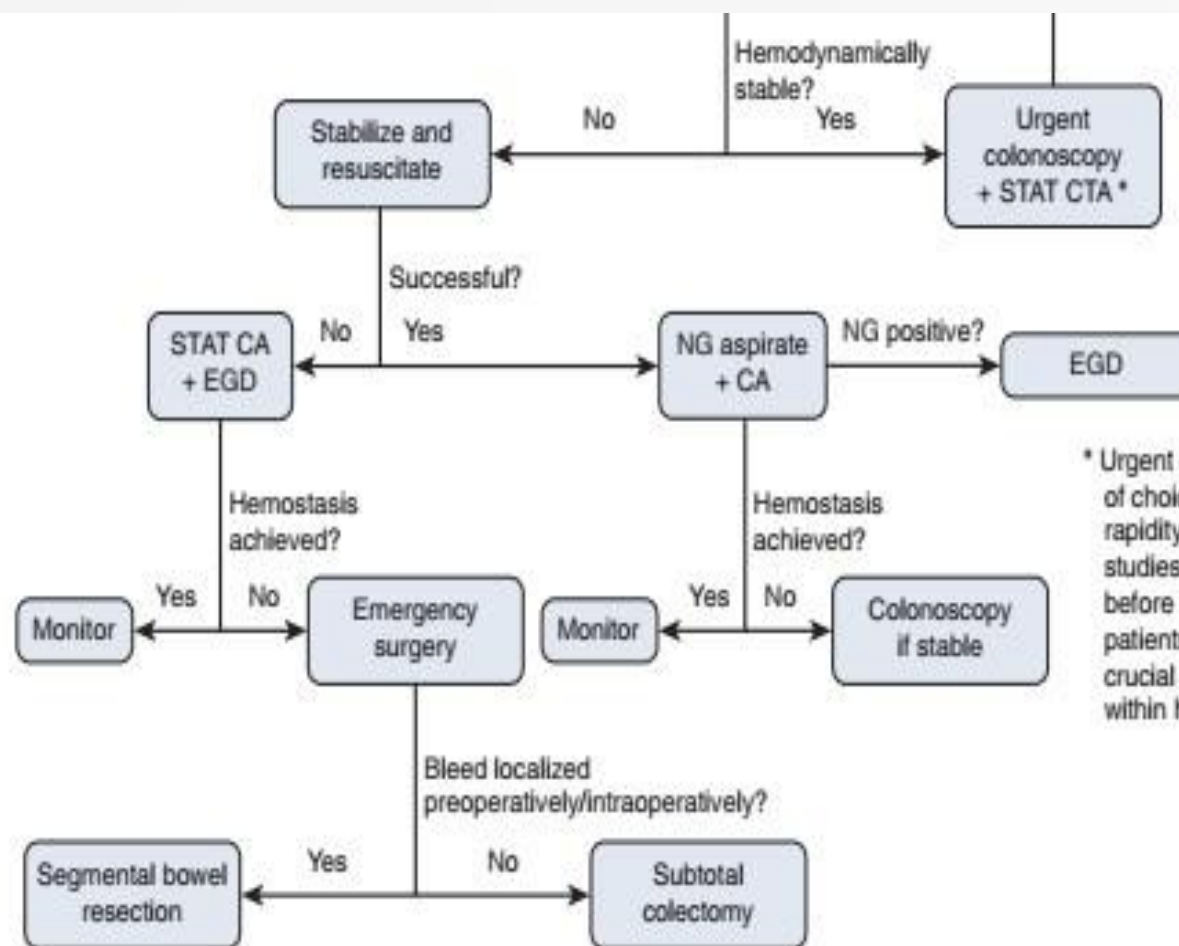
- **Massive bleeding**

Treated on an emergency basis.

1. For massive bleeding start the usual **resuscitative measures**.
2. Fortunately in the majority of cases , bleeding will **stop spontaneously** and the surgeon has the time to diagnose and treat the patient electively.
3. If massive bleeding continues , proceed with **colonoscopy or angiography** according to the available experience and facilities . If angiography succeeds in localizing the bleeding point ,an attempt can be made to stop bleeding by injection of vasopressin 0.2unit minute or by embolization with thrombin or gel foam.
If colonoscopy visualizes an area of vascular malformation(angiodysplasia),bleeding can be stopped by diathermy or laser.

4. If all **the previous measures fail to stop bleeding** or if the bleeding is massive (blood loss more than 2,5 litres over 48 hours), surgical intervention will have a lower mortality than continued conservative management.
5. If the source of bleeding could **be localized** preoperatively , segmental resection of the colon would be performed.
6. If there are absolutely no clues as to the source of bleeding , **total colectomy may be indicated.**

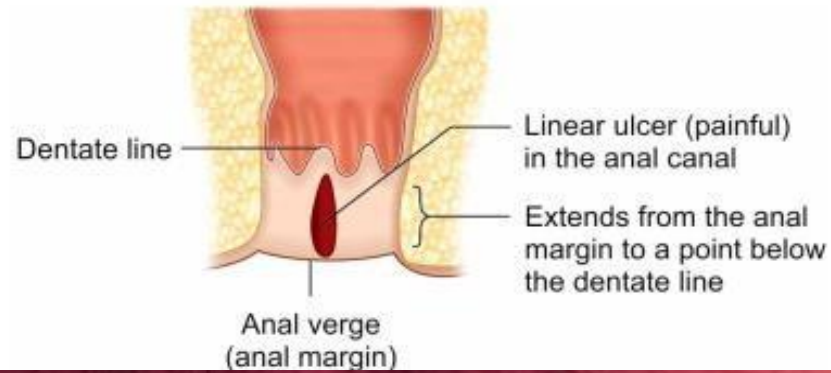




* Urgent colonoscopy is considered the test of choice by most authorities; however, the rapidity and high accuracy of CTA in recent studies prompts us to consider STAT CTA before initiating bowel prep in stable patients without contraindications. It remains crucial that colonoscopy be performed within hours of the patient's presentation.

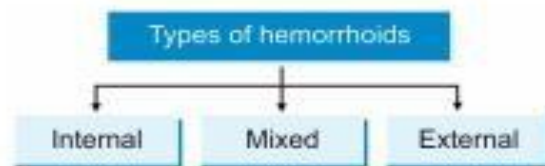
FIGURE 1 Algorithmic approach to acute lower gastrointestinal bleeding. CA, catheter angiography; CE, capsule endoscopy; CTA, computed tomography angiography; DBE, double-balloon endoscopy; EGD, esophagogastroduodenoscopy; LGIB, lower gastrointestinal bleeding; NG, nasogastric.

Fissure-in-Ano



piles

Types



- Above the dentate line
- Covered by transitional and columnar epithelium



- Below the dentate line
- Covered by squamous epithelium



- Both above and below the dentate line
- Elements of both internal and external hemorrhoids

1st degree



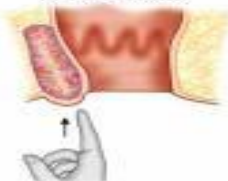
- Bleeding only
- No prolapse

2nd degree



- Prolapse during defecation and spontaneously reduce

3rd degree



- Prolapse during defecation, requiring manual reduction

4th degree



- Prolapsed, cannot be reduced



4th degree hemorrhoids

How to Examine a Patient with Hemorrhoids?

▲ Inspection—

- Large third-degree and all fourth-degree hemorrhoids are readily recognized
- After straining, second-degree hemorrhoids become apparent
- In first degree hemorrhoids, no abnormality can be seen.

[Other associated pathologies (e.g. fissure and fistula) may be present.]

▲ Palpation

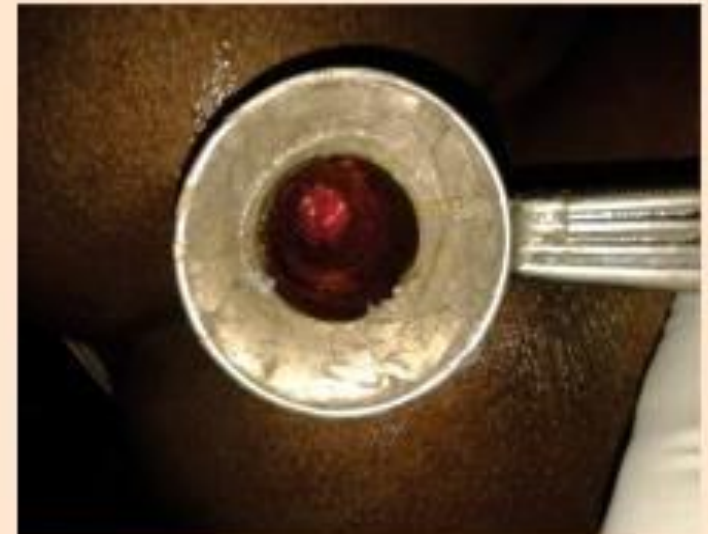
- Assessment of sphincter tone
- Exclusion of any anal canal or low rectal neoplasm.

▲ **Proctoscopy**—To confirm the finding during inspection and palpation.

▲ **Sigmoidoscopy**—To exclude proximal inflammation or neoplasia.

▲ **Colonoscopy**—It is essential if:

- Symptoms not corroborating with clinical findings
- Patient is older than 40 years
- Patient with risk factors for colonic carcinoma.



Proctoscopy is essential for diagnosis of hemorrhoids

Diverticulosis, Diverticulitis

UCOLON 798
FEM 55

05/13/98
13:05:25



DR. MURRA SACA

VC 572002

M. 58
10/08/1943
04/16/2002
17:11:41

CVP:
D.F:
6:8 0:H



DR. MURRA SACA

Colonic Polyps, malignancy

UCOLON
MAS 27
03/23/74

08/02/01
11:24:44



DR. MURRA SACA

VC 132002

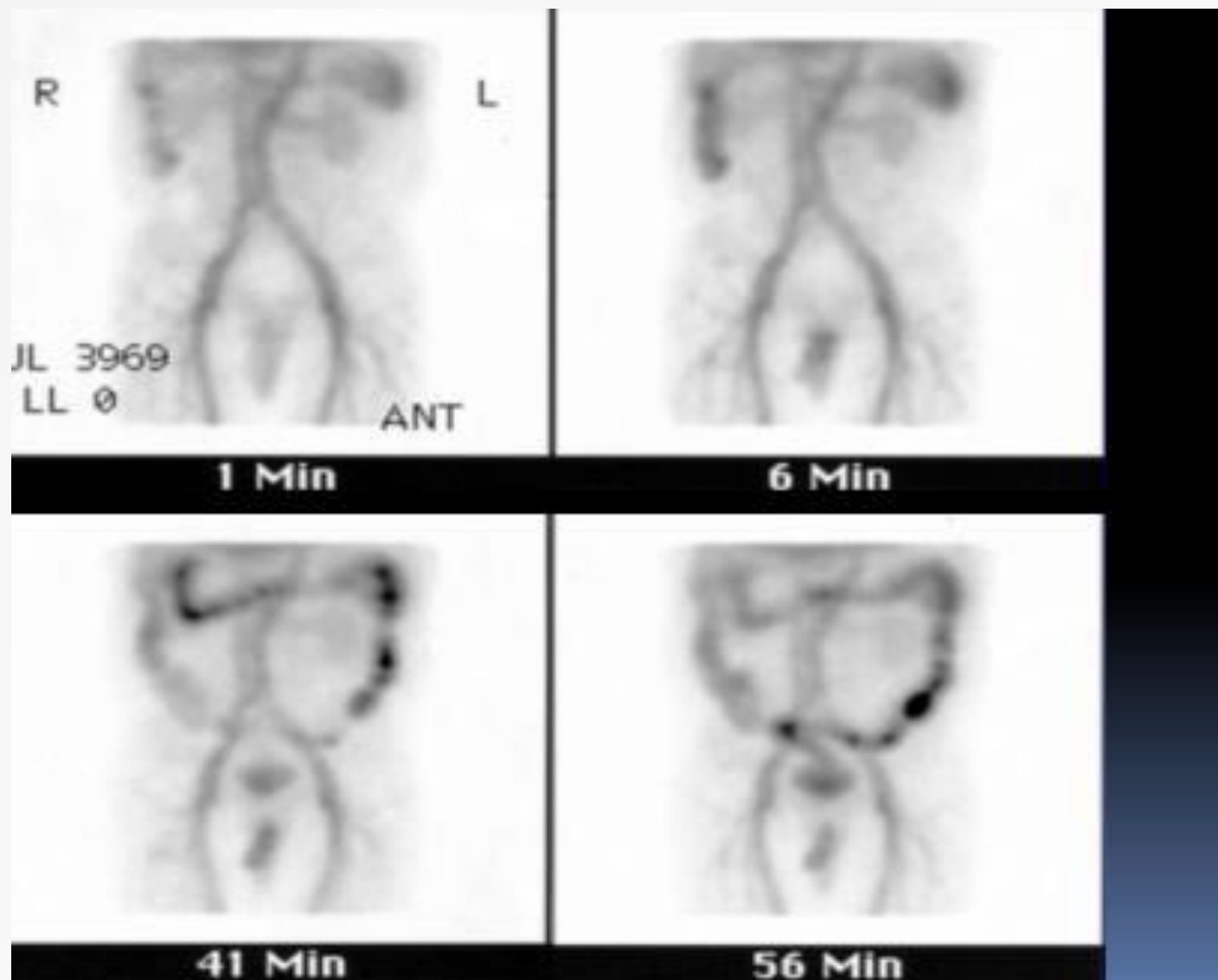
F 50
01/04/1952

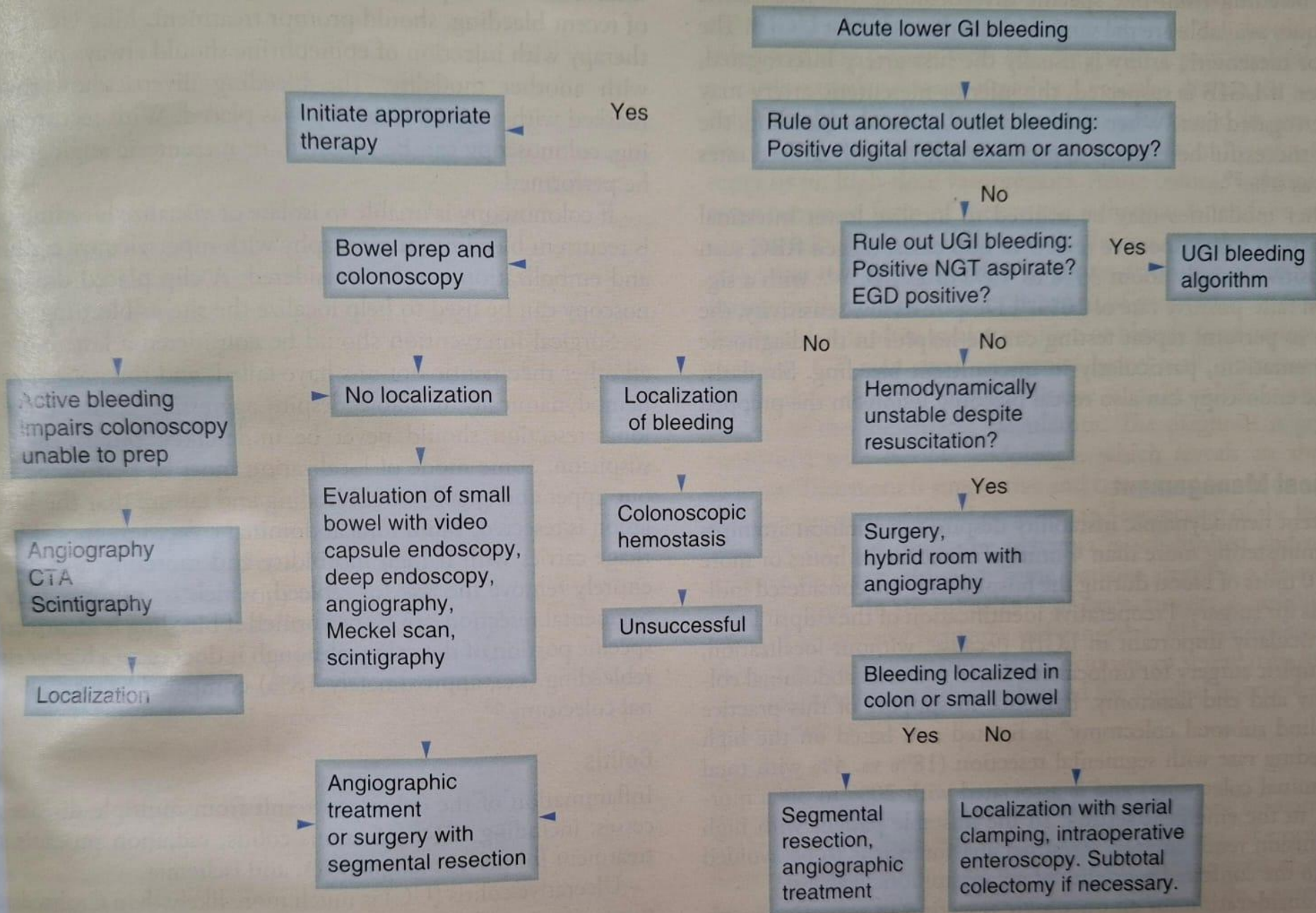
02/04/2002
14:27:21

CYP:
D.F:
b:8 b:N



DR. MURRA SACA





Questions!!

- 1-A 77-year-old man is admitted with bright red blood per rectum. He takes warfarin for atrial fibrillation and has hypertension, aortic stenosis, and chronic obstructive pulmonary disease. The patient's initial hemoglobin upon presentation is 6.7 g/dL, and his international normalized ratio (INR) is 2.2. Initially, his blood pressure is 86/56, which improves to 112/74 with infusion of two units of packed red blood cells (RBCs), four units of fresh frozen plasma, and crystalloids. A nasogastric tube is placed, and lavage reveals bilious contents and no blood. Rectal examination reveals gross blood in the rectal vault but no hemorrhoids or fissures. Colonoscopy reveals blood throughout the colon but no identifiable source. What should be the next
 - step in management?
 - A. Tagged RBC scan
 - B. H2 blocker
 - C. Mesenteric angiography
 - D. Exploratory laparoscopy
 - E. Total abdominal colectomy

- 2-Which of the following is the most common cause of massive colonic bleeding?
 - A. CRC
 - B. Ulcerative colitis
 - C. Diverticulosis
 - D. Ischemic colitis
 - E. Infectious colitis

- **3-Most common cause of fresh bleeding per rectum in a 5-years old child is:**
 - a. Volvulus b. Trauma
 - c. Worm infestation d. Rectal polyp

- **4-Bleeding per rectum is present in all, except:**
 - a. Meckel's diverticulum
 - b. Sigmoid volvulus
 - c. Carcinoma rectum
 - d. Ulcerative colitis

- **5-. A 65-year-old man presented with an episode of syncope. He said he felt dizzy during defecation and noticed gross bleeding in the pan. Fecal occult blood test done 3 months ago as a part of routine screening for colon cancer was negative. There is no history of recent weight loss. What is the likely colonoscopic finding?**
 - a. Early stage carcinoma colon
 - b. Sigmoid diverticulitis
 - c. Microscopic colitis
 - d. Dilated mucosal and submucosal veins in the colon

- **6-Most common site of angio dysplasia is:**
 - a. Sigmoid colon b. Transverse colon
 - c. Ascending colon d. Descending colon

- **7. The most useful investigation for profuse lower gastrointestinal bleeding is:**
 - a. Proctosigmoidoscopy
 - b. Colonoscopy
 - c. Double contrast barium enema
 - d. Selective arteriography

answers

- 1-c
- 2-c
- 3-d
- 4-b
- 5-d
- 6-c
- 7-b

ANY
QUESTIONS?

