

GASTROINTESTINAL BLEEDING

Definition

Bleeding that originates in the gastrointestinal tract

Epidemiology

1% of hospital admissions

Incidence 60-100/100.00 inhabitants/yr (decreasing)

Mortality 10%

GASTROINTESTINAL BLEEDING

Clinical presentation

It depends on the site of bleeding, the volume loss and rate of loss.

Hematemesis

- Emission of blood with vomit, mostly bright red or, less frequently black if digested by hydrochloric acid.

Bright red: more frequent for massive blood loss above the Treitz angle

Coffe ground : less frequent, if blood has been digested by hydrochloric acids

Differential Diagnosis with **Haemoptysis:** Blood with cough

GASTROINTESTINAL BLEEDING

Clinical presentation

Melena

- Emission of black, liquid or semi-liquid stools.

Hemoglobin is degraded into hematin in the intestine.

→ More frequently associated to a site of bleeding above the ileocecal valve

→ Rarely it may originate in the right colon in case of slowed intestinal transit

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Clinical presentation

Hematochezia

- Emission of bright red blood with feces, alone or mixed with feces.

Proctorrhagia

- Emission of red or dark red blood from rectum with or without clots

They generally originate from a site distal to the Treitz ligament.

However, a massive bleeding in the upper intestine may result in large volumes of bright red blood in the feces : **RED MELENA**

GASTROINTESTINAL BLEEDING

Hematochezia

- Red blood + **diarrhea** + **mucus** and **pus** = Inflammatory Bowel Disease
- Red blood **mixed with feces** = bleeding site proximal to the rectum
- Red blood on the **surface of solid stools** or appearing after defecation = Anorectal bleeding (Hemorrhoids, rectal polyps)

GASTROINTESTINAL BLEEDING

Occult Gastrointestinal Bleeding

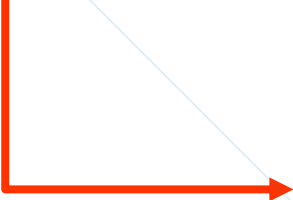
- There is no visible blood in the feces.
- Fecal Occult Blood Test required to detect traces of hemoglobin in the stools
- It may originate anywhere in the gastrointestinal tract
- Systemic symptoms may or may not be present according to the rate and length of blood loss: more frequently sideropenic anemia.
- The causes of occult blood bleeding may be more important than systemic consequences : i.e. colorectal cancer

GASTROINTESTINAL BLEEDING

Clinical presentation

Acute -
Massive

- They may induce hemodynamic instability and anemia



Deep fatigue
Pale skin
Alteration of conscience status
Cold Sweat
Hypotension (Orthostatic)
Tachycardia
Hypovolemic Shock
Normocromic Anemia

GASTROINTESTINAL BLEEDING

Clinical presentation

Cronic
(Relapsing)

- They may be associated with sideropenic anemia and hemodynamic signs.

Fatigue

Pale skin

Tachycardia

Sideropenic Anemia

Cronic

- No sign or symptom if compensatory mechanisms (iron absorption, hemopoiesis) are efficient.

GASTROINTESTINAL BLEEDING

Causes

Upper GI Bleeding (78%)

Lower GI Bleeding (18%)

Obscure GI Bleeding (less than 5 %)

Either Overt (visible blood) or Occult (no visible blood) GI bleeding after both upper GI and Lower GI endoscopy have found no causes of GI bleeding.

GASTROINTESTINAL BLEEDING

Emorragie non varicose

Ulcera duodenale (24,3%)

Erosioni gastriche (23,4%)

Ulcera gastrica (21,3%)

Sindrome di Mallory-Weiss (7,2%)

Esofagite (6,3%)

Duodenite erosiva (5,8%)

Neoplasia (2,9%)

Ulcera anastomotica (1,8%)

Miscellanea (Dieulafoy's-Polyps)

Paziente cirrotico

Varici esofagee

Varici gastriche

Gastropatia
congestizia

Emorragia Digestiva Superiore non varicosa

Le **erosioni gastriche** sono la seconda causa di emorragia e sono classicamente associate a:

1. Assunzione di FANS
2. Ingestione di alcool
3. Stress

La **sindrome di Mallory-Weiss** è una lacerazione longitudinale del passaggio esofago-gastrico

Rappresenta il 5-10% delle emorragie digestive superiori

Tipicamente si manifesta dopo conati di vomito per poi arrestarsi spontaneamente nella maggior parte dei casi

GASTROINTESTINAL BLEEDING

Risk factors

Helicobacter pylori

NSAIDs

Antiplatelet

Anticoagulant

SSRI

GASTROINTESTINAL BLEEDING

Causes

Lower Gastrointestinal bleeding

Adolescenti

Diverticolo di Meckel

Polipi giovanili

Malattie infiammatorie
croniche intestinali

Adulti < 60 anni

Polipi adenomatosi

Malattie infiammatorie
croniche intestinali

Coliti infettive

Diverticoli

Neoplasie

Angiodisplasie

Adulti > 60 anni

Diverticoli

Angiodisplasie

Neoplasie

Colite ischemica

GASTROINTESTINAL BLEEDING

Causes

Obscure GI Bleeding

(Jejunum-Ileum)

- Angiodysplasia 70-80%
- Neoplasms 5-10%
- Meckel's diverticulum
- Drugs (NSAIDs)
- Crohn's disease
- Zollinger-Ellison
- Vasculitis

GASTROINTESTINAL BLEEDING

Approach to acute (and chronic) GI bleeding

1 - Stabilize patient :

- systolic blood pressure and heart rate, both supine and orthostatic
- Peripheral or central vein
- Nasogastric tube
- Rectal exploration
- Hematocrit, RBC, INR, Creatinine, aPTT, hemogas analysis
blood typing, compatibility testing.

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Approach to acute and chronic GI bleeding

2 - Detect site of bleeding

Upper → Upper GI endoscopy (urgent)

Lower → Lower GI endoscopy - Angio TC-
Angiography

Obscure GI Bleeding

Enteroscopy ← Videocapsule → Angiography

GASTROINTESTINAL BLEEDING

General Therapy

1 - Fluids, Oxygen, RBC, Antibiotics

2 - Pharmacological : PPI (IV).

Glypressin (IV) (reduces splanchnic circulation)

3 - Endoscopy:

Band ligation (varices)

Glue injection

Vasoactive substances (Adrenalin)

Mechanical devices : Hemoclips

Local therapy: cauterization, Argon-laser

Polypectomy

4-Arterial embolization

5-Trans-Jugular Portosystemic Shunt TIPS (portal hypertension)

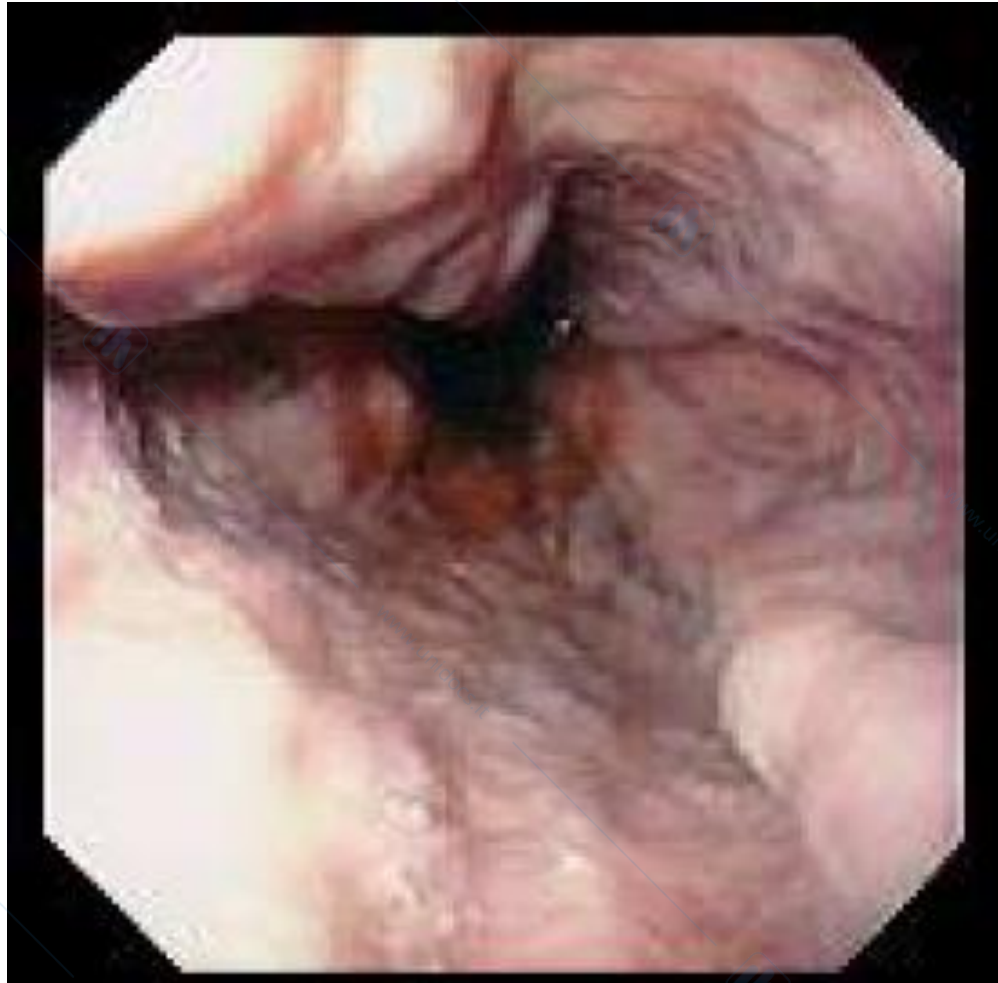
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Need for surgery

- 1 - Highly instable hemodynamic status or rapidly worsening
- 2 - Need for more than 2-4 blood units for early relapse after first conservative treatment
- 3 - Neoplasm, perforation

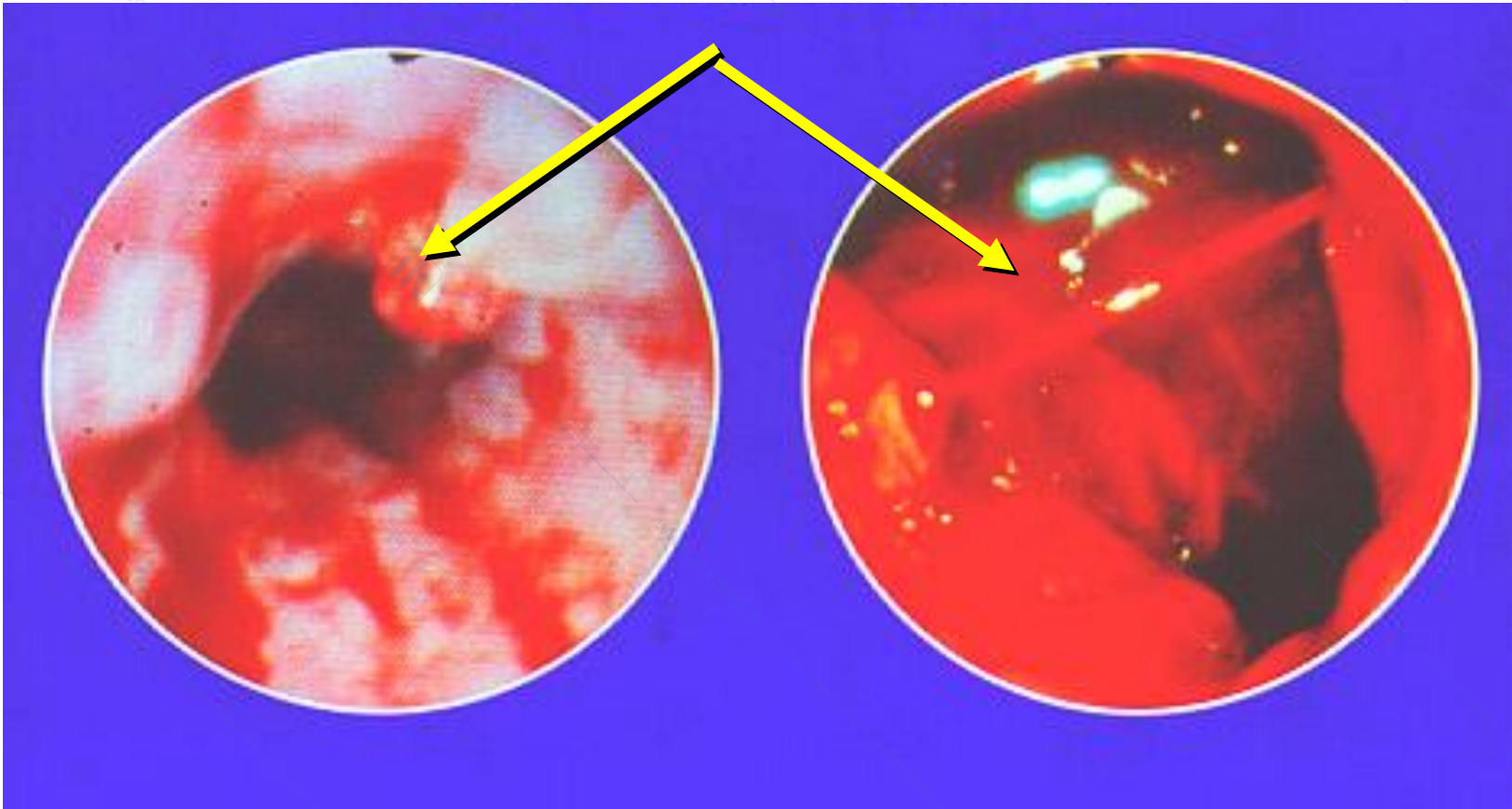
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Esophageal varices F3 with red spots



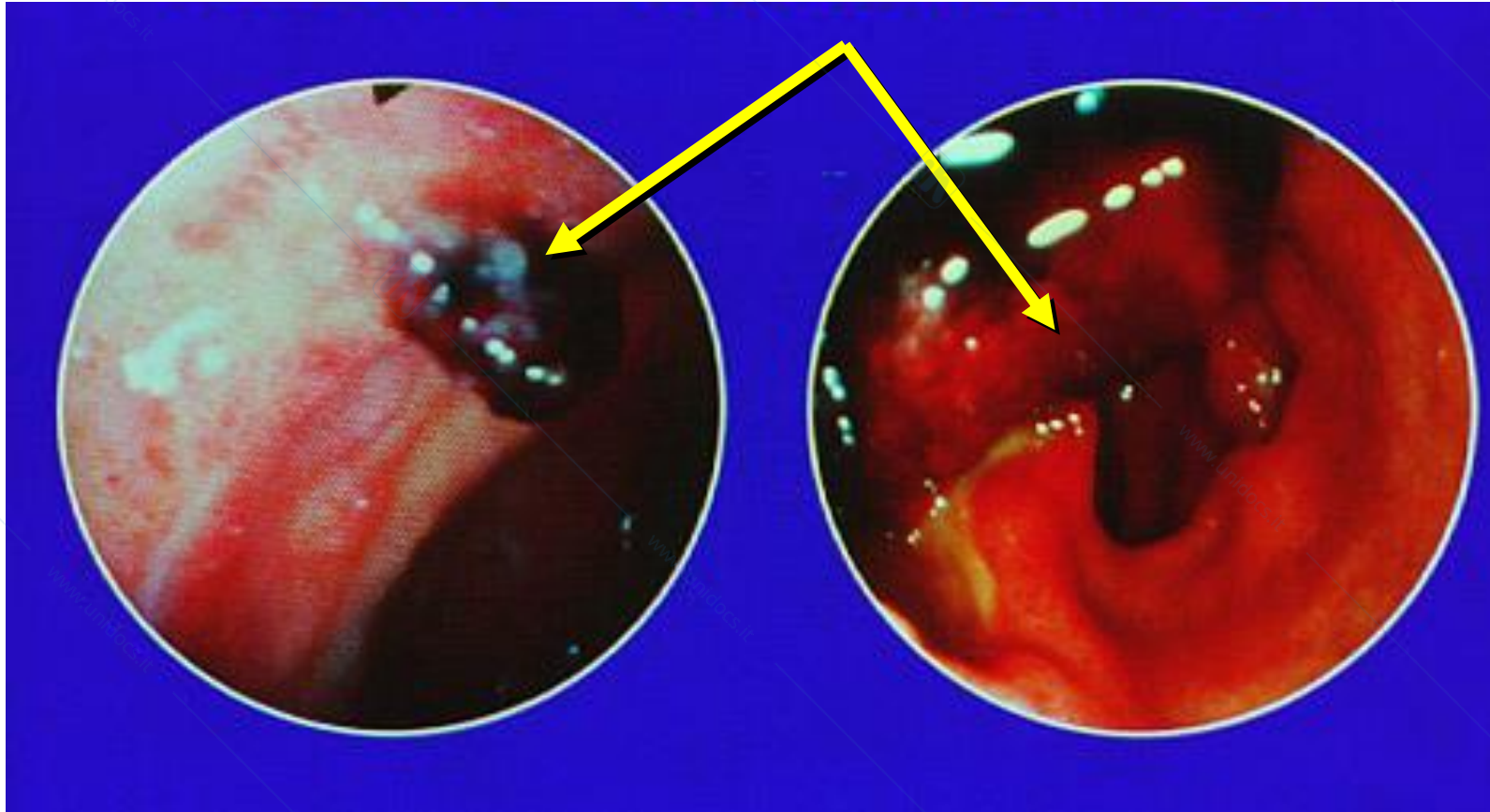
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Bleeding esophageal varices



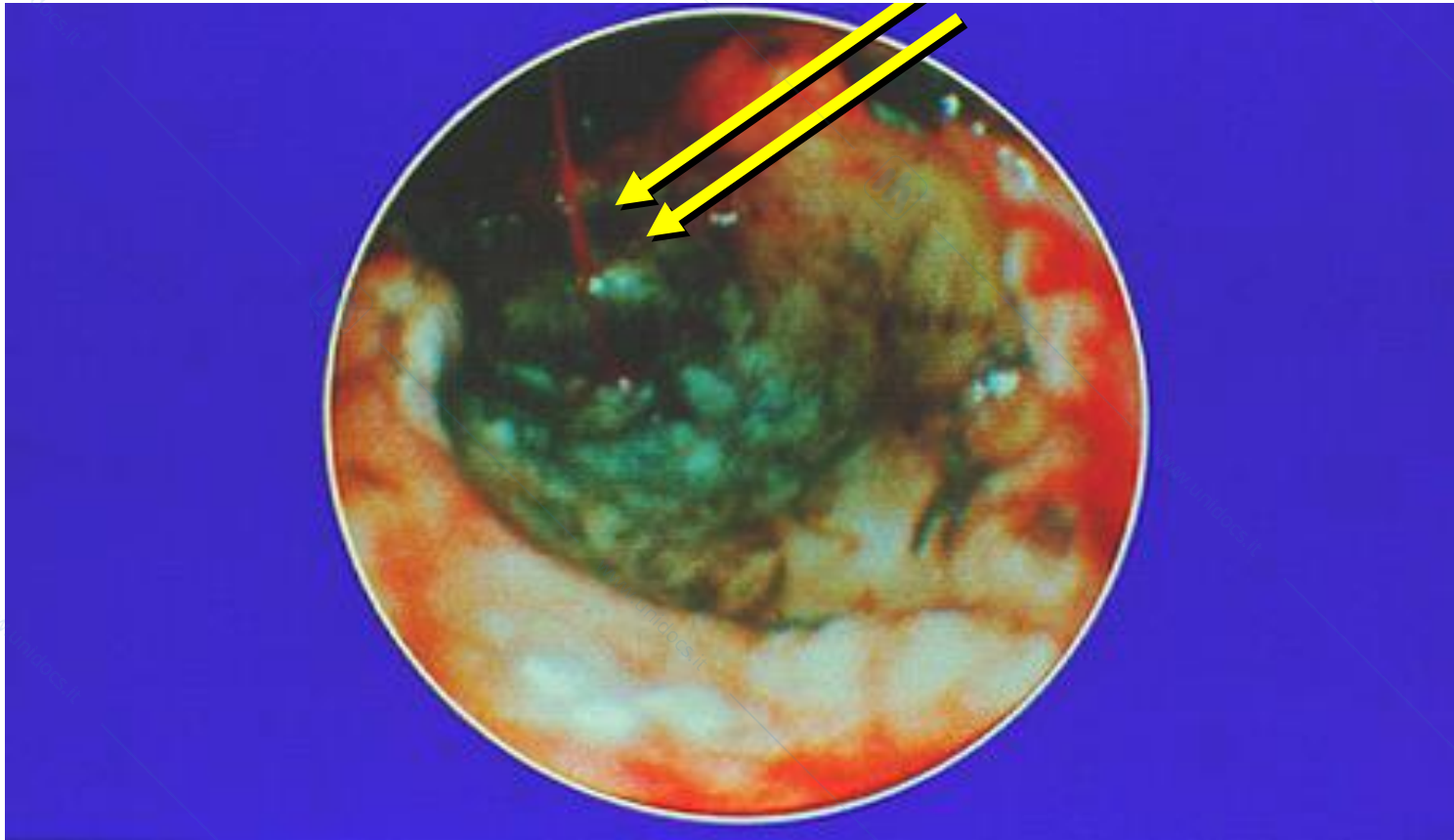
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Duodenal ulcer with overlying clot



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Duodenal ulcer arterial bleeding



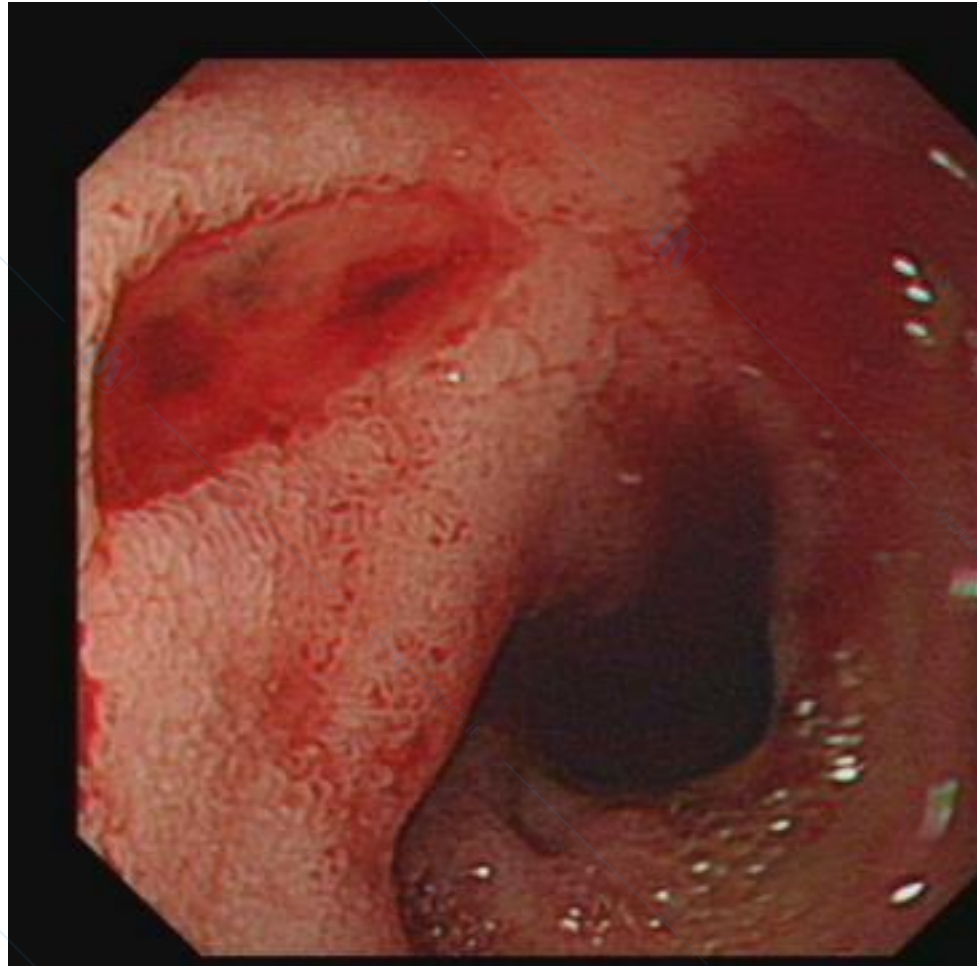
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Gastric fundus ulcer cover by hematin



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Duodenal ulcer with visible vessel



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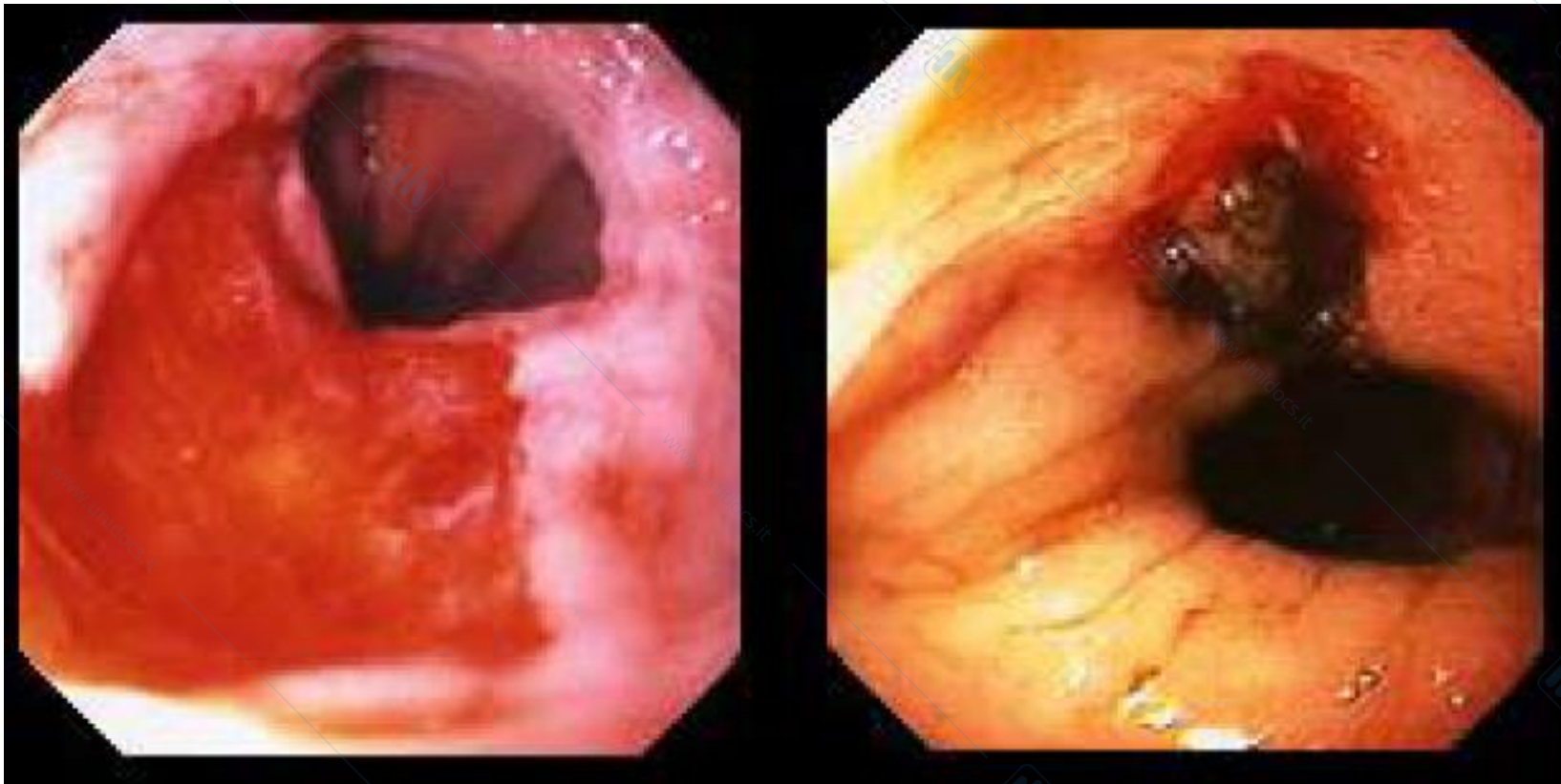
Upper Gastrointestinal bleeding

Forrest classification of bleeding ulcers in relation to rebleeding

<i>Classe di Forrest</i>	<i>Aspetto della lesione</i>	<i>% di risanguinamento</i>
Ia	Sanguinamento a getto	50-70
Ib	Sanguinamento a nappo	50-70
IIa	Vaso visibile sul fondo dell'ulcera	50-70
IIb	Coagulo adeso sul fondo dell'ulcera	33-36
IIc	Chiazza di ematina sul fondo dell'ulcera	18-25
III	Ulcera con fondo fibrinoso	1-3

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Bleeding Mallory-Weiss



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Gastric Dieulafoy



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Gastric antrum hemorrhagic gastropathy



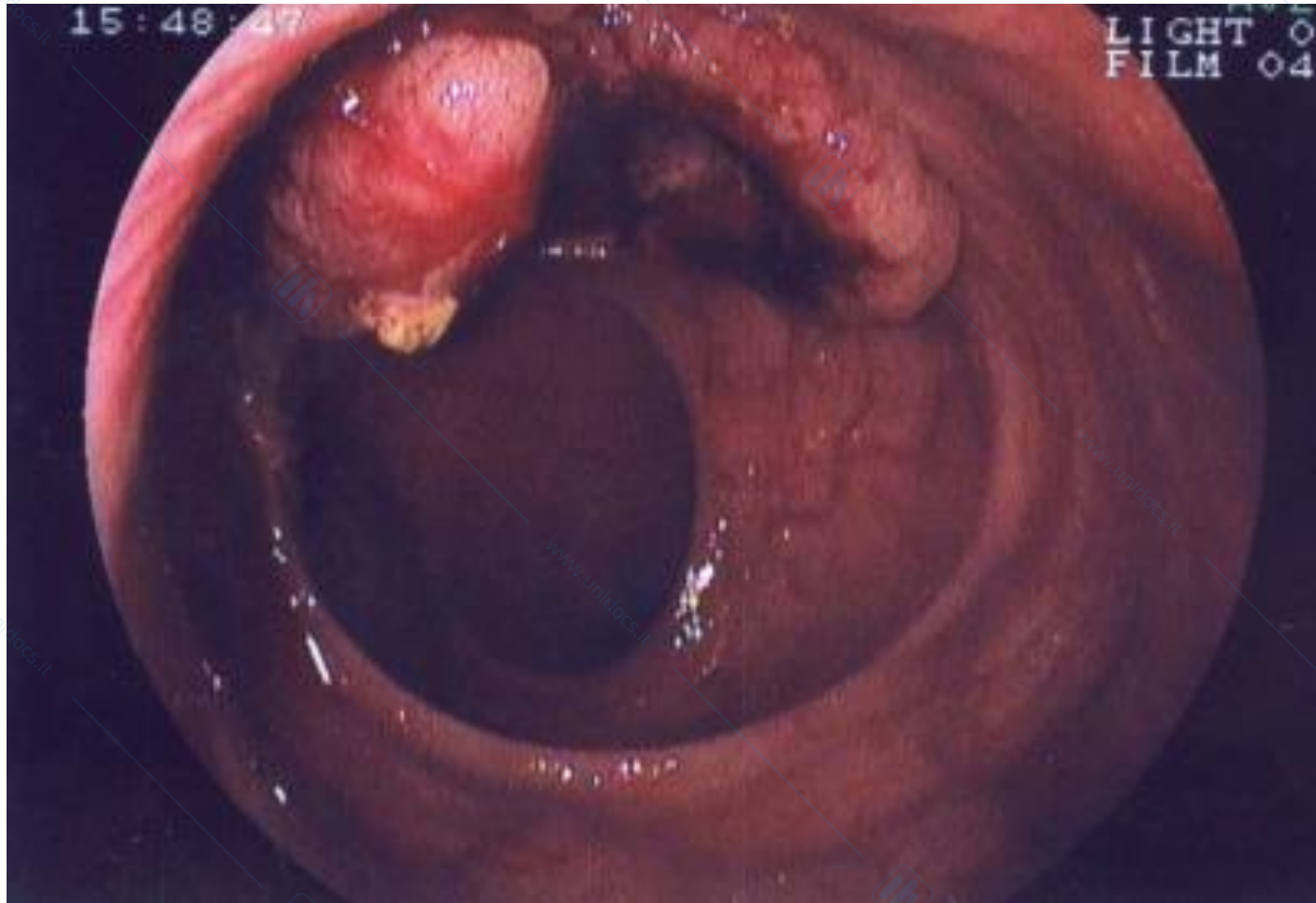
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Gastric Vascular Antral Ectasia (GAVE)



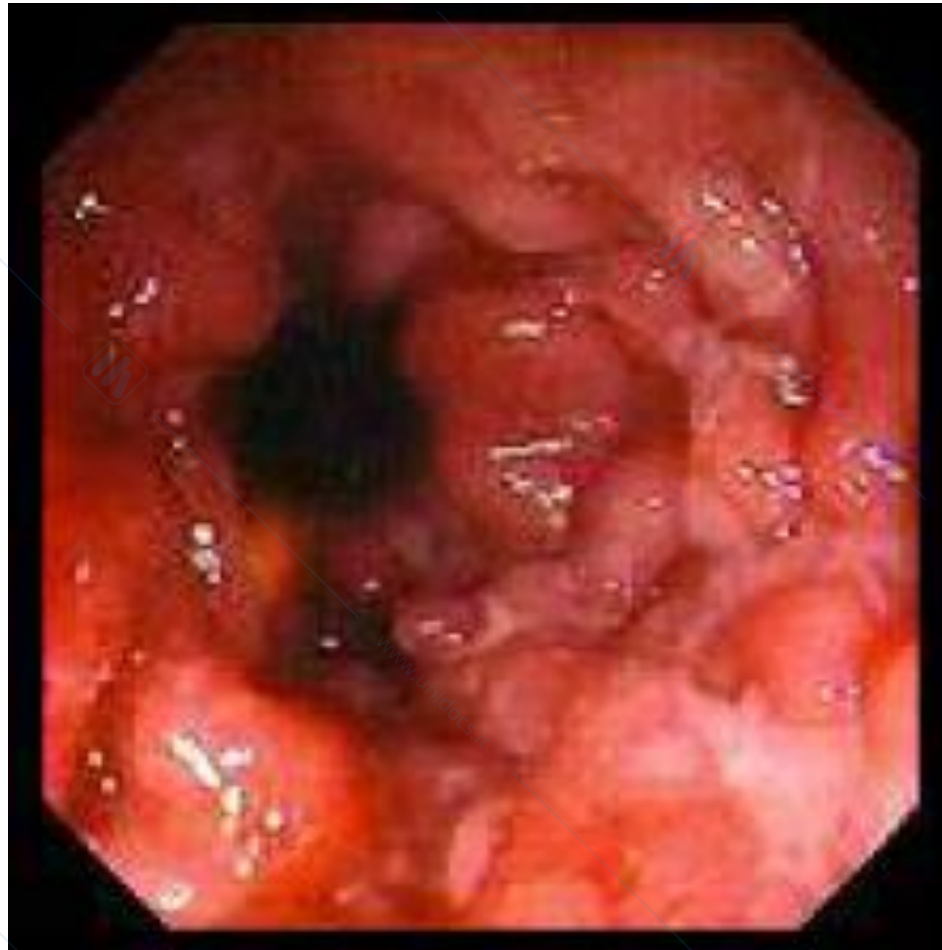
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Bleeding colon cancer



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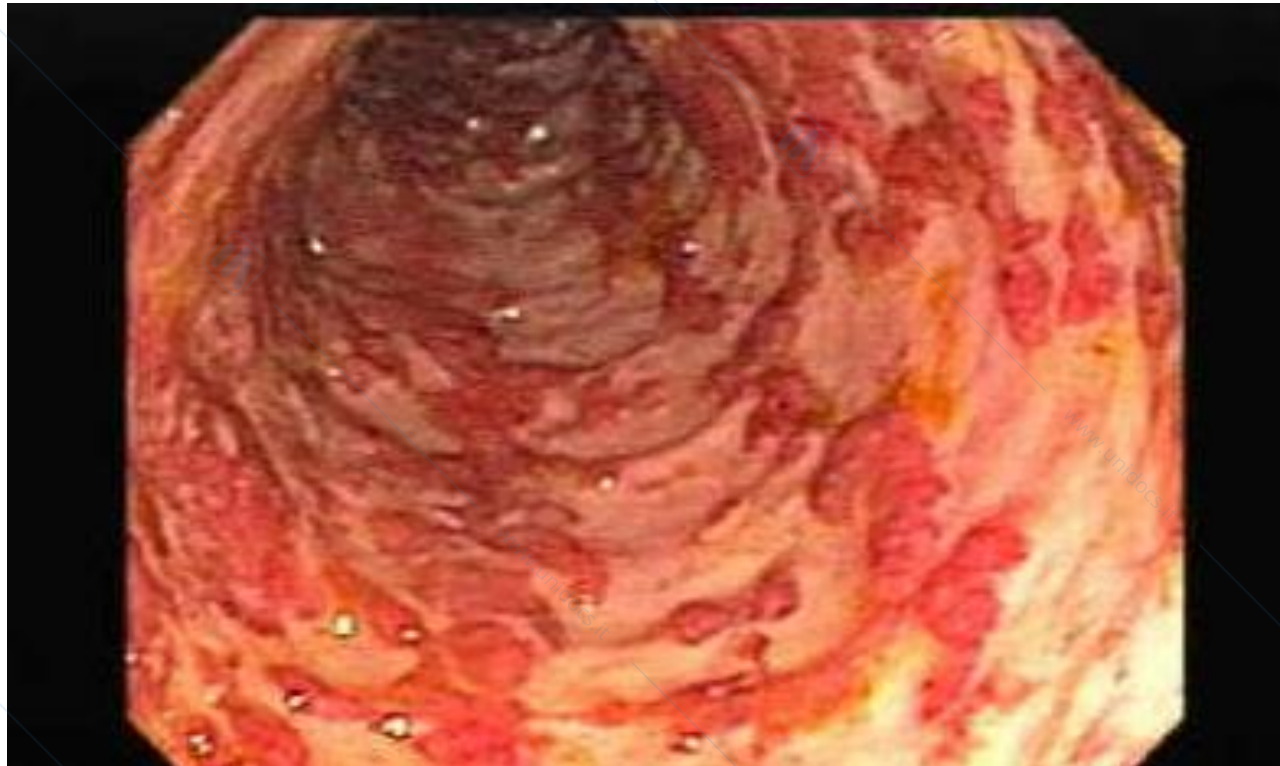
Ulcerous colitis with severe endoscopic activity



Mayo 3

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Ulcerous colitis with severe endoscopic activity



Mayo 3

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Colon angiodysplasia



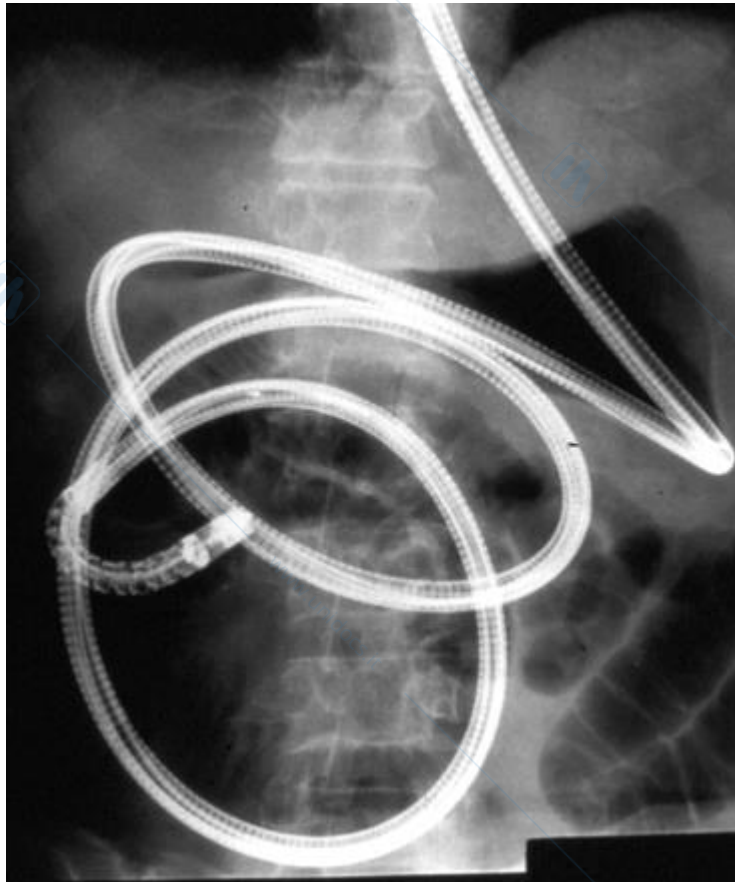
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Capsule endoscopy of small intestine



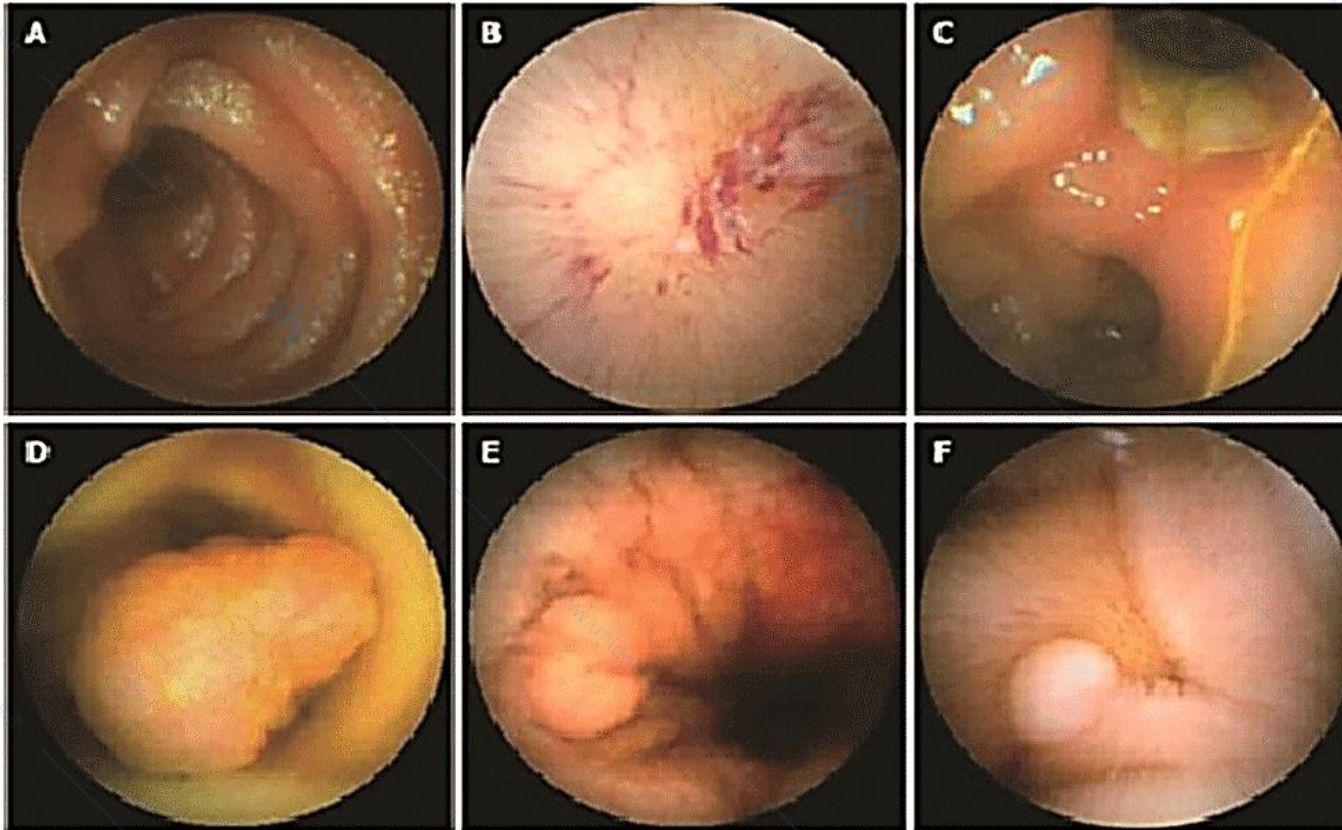
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Enteroscopy of small intestine



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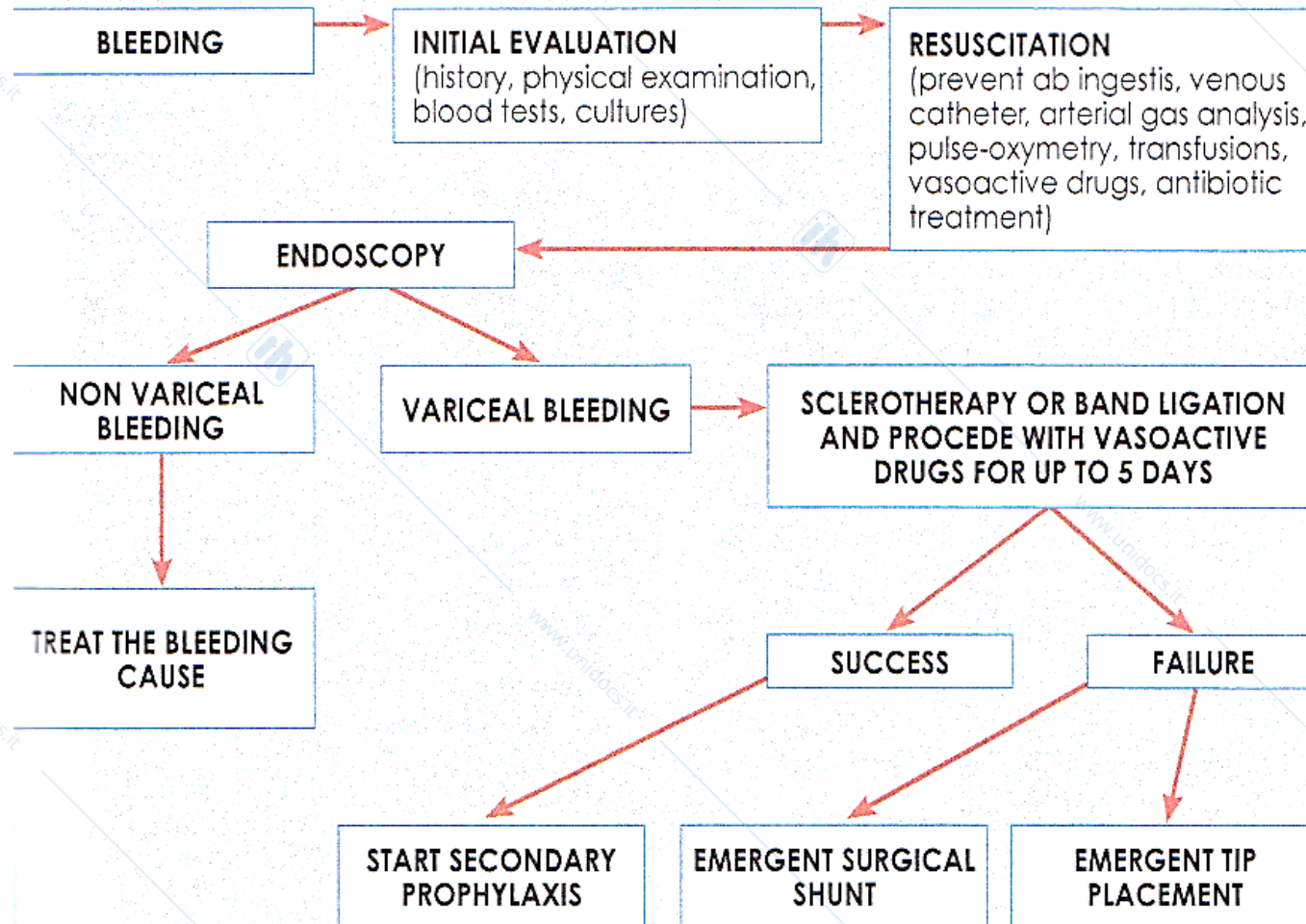
Capsule endoscopy of small intestine



(A) Normal small bowel mucosa; (B) Angioectasia; (C) Ulcer; (D) Tumor; (E) Crohn's disease; (F) Polyp.

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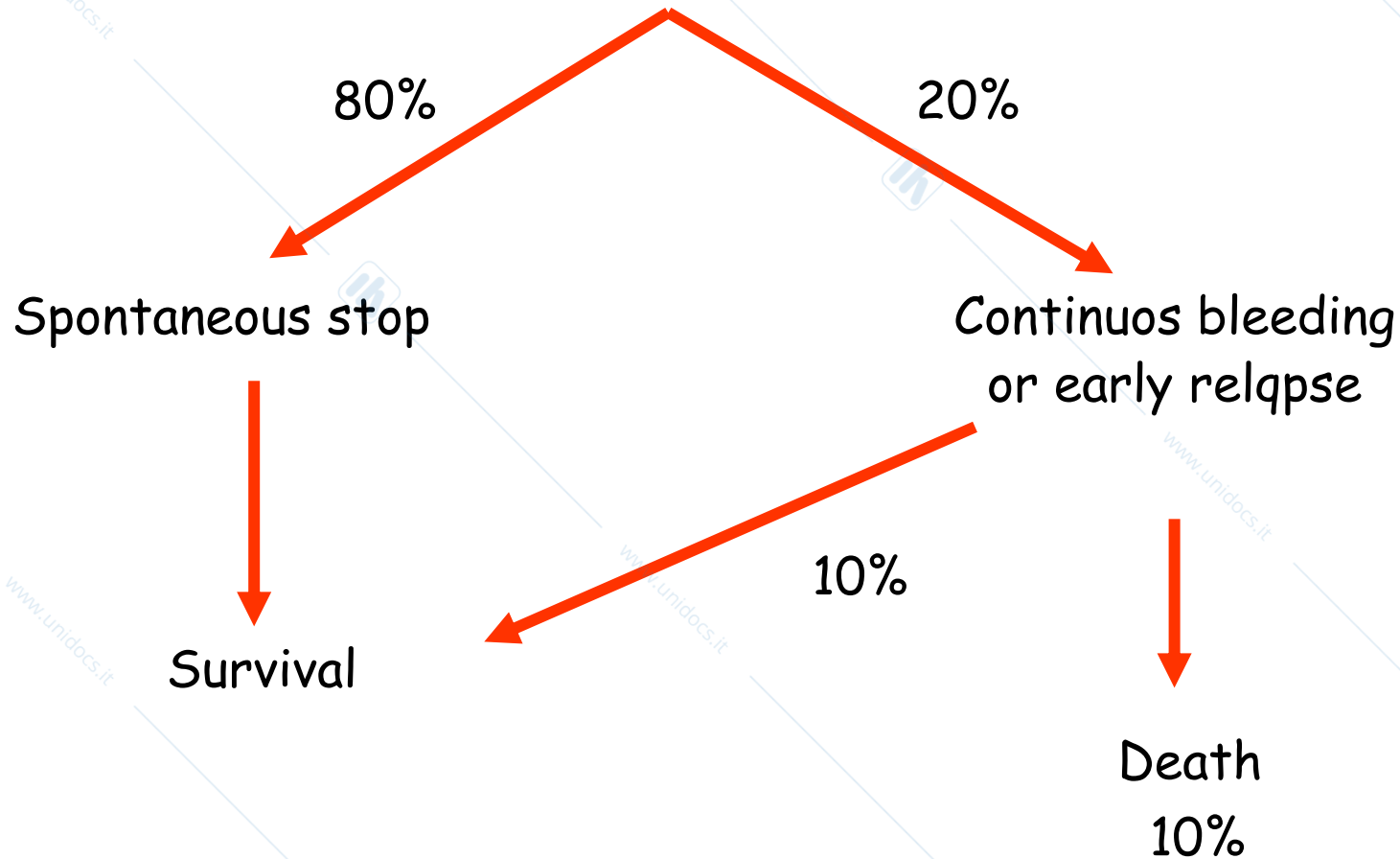
Approach to variceal GI bleeding



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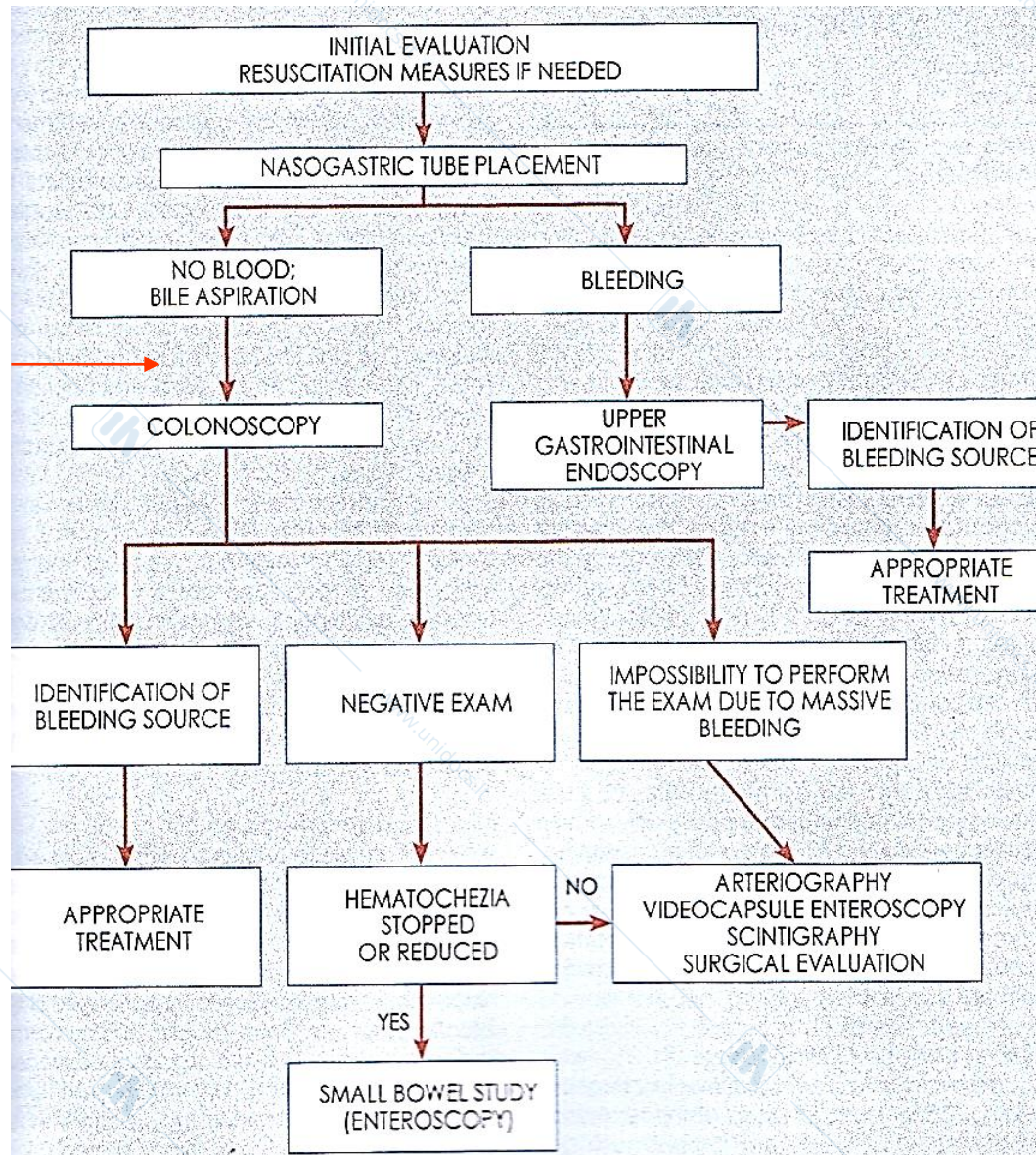
Prognosis

Upper GI Bleeding



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Approach to severe Hematochezia



Bowel preparation