Benign Gastric and Duodenal diseases

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Objectives

- Definition
- Presentation
- Diagnosis
- treatment

BOOK REFERNCE

- **CURRENT SURGICAL DIAGNOSIS & TREATMENT**

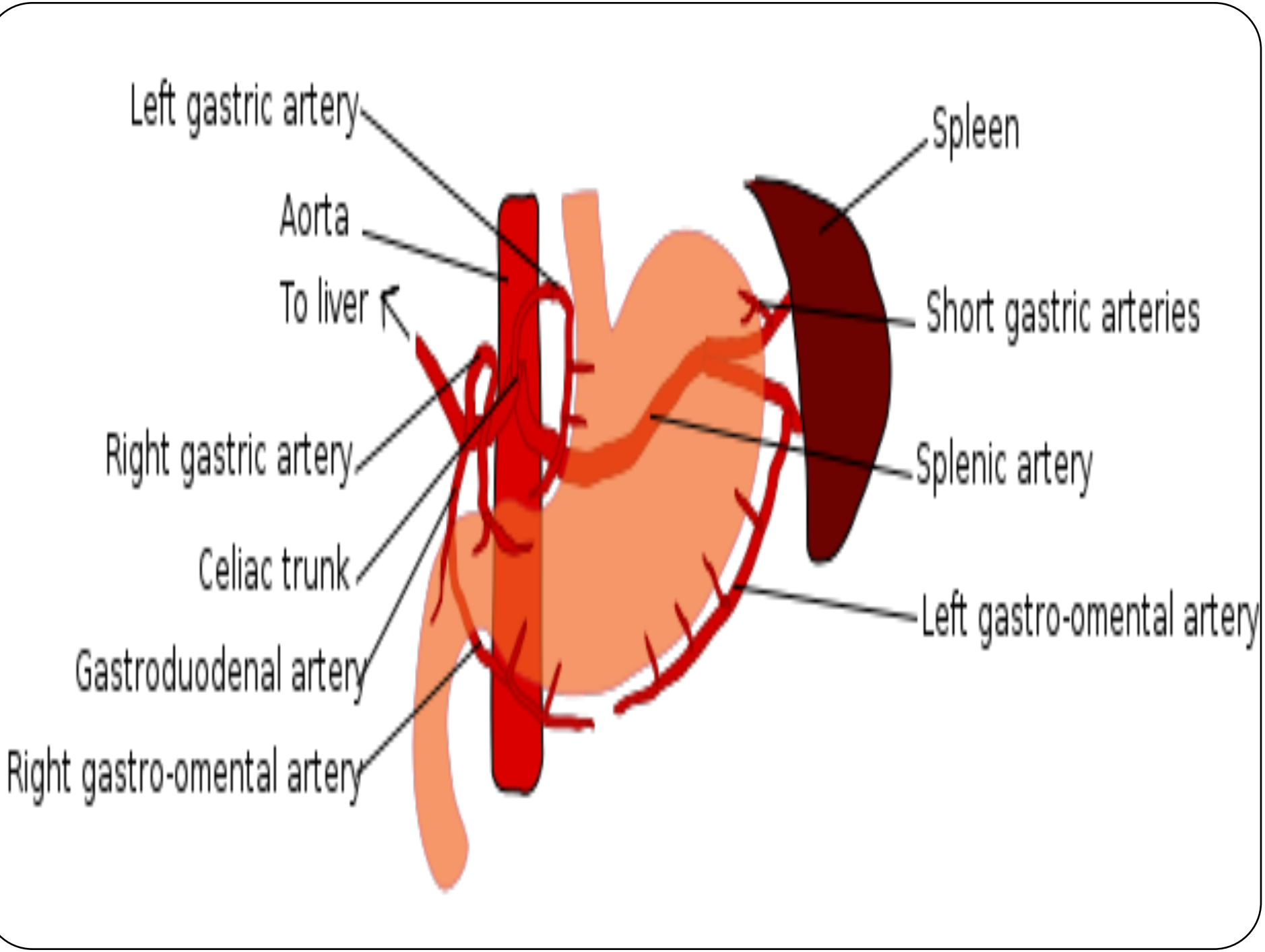
BY LAWRENCE W. WAY

GERARD M. DOHERTY

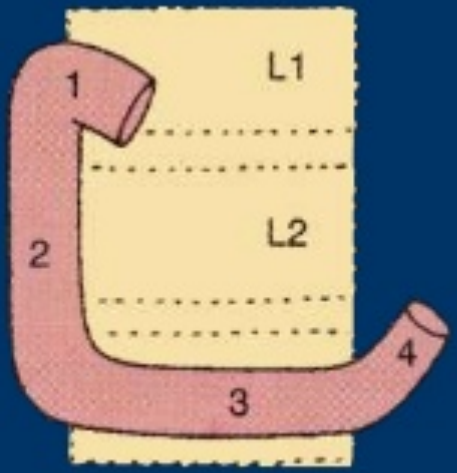
Important notice

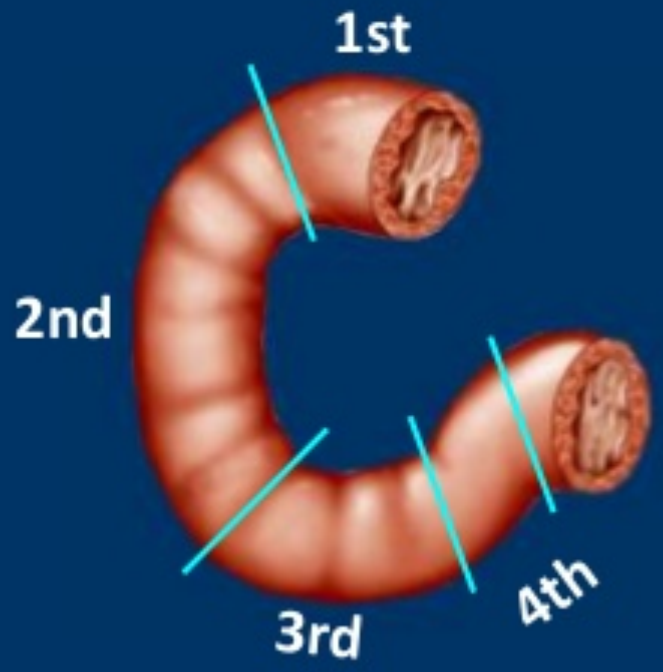
- **Stomach & Duodenum anatomy and physiology are included in the examination and you need to cover it, I am not going to cover it in this presentation**


Fundus
Body

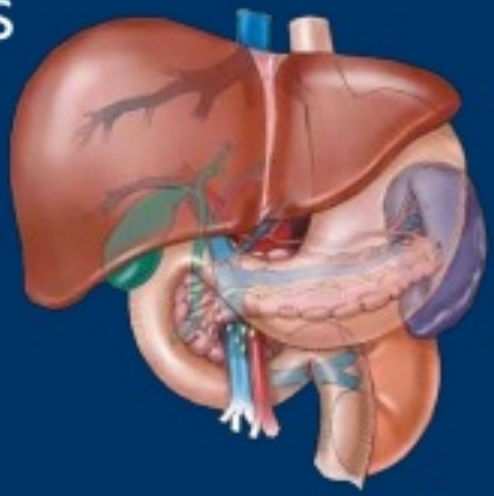

Left gastric artery
Aorta
To liver
Right gastric artery
Celiac trunk
Gastroduodenal artery
Right gastro-omental artery
Spleen
Short gastric arteries
Splenic artery
Left gastro-omental artery

Duodenum - parts





25 cm long & Subdivided into 4 parts



First / upper part – 5 cm
Second / vertical part – 7.5 cm
Third / horizontal part – 10 cm
Fourth / ascending part – 2.5 cm

Presentation

- **Pain:**

  1- ULCER DISEASE

  2- PERFORATION

- **Bleeding:**

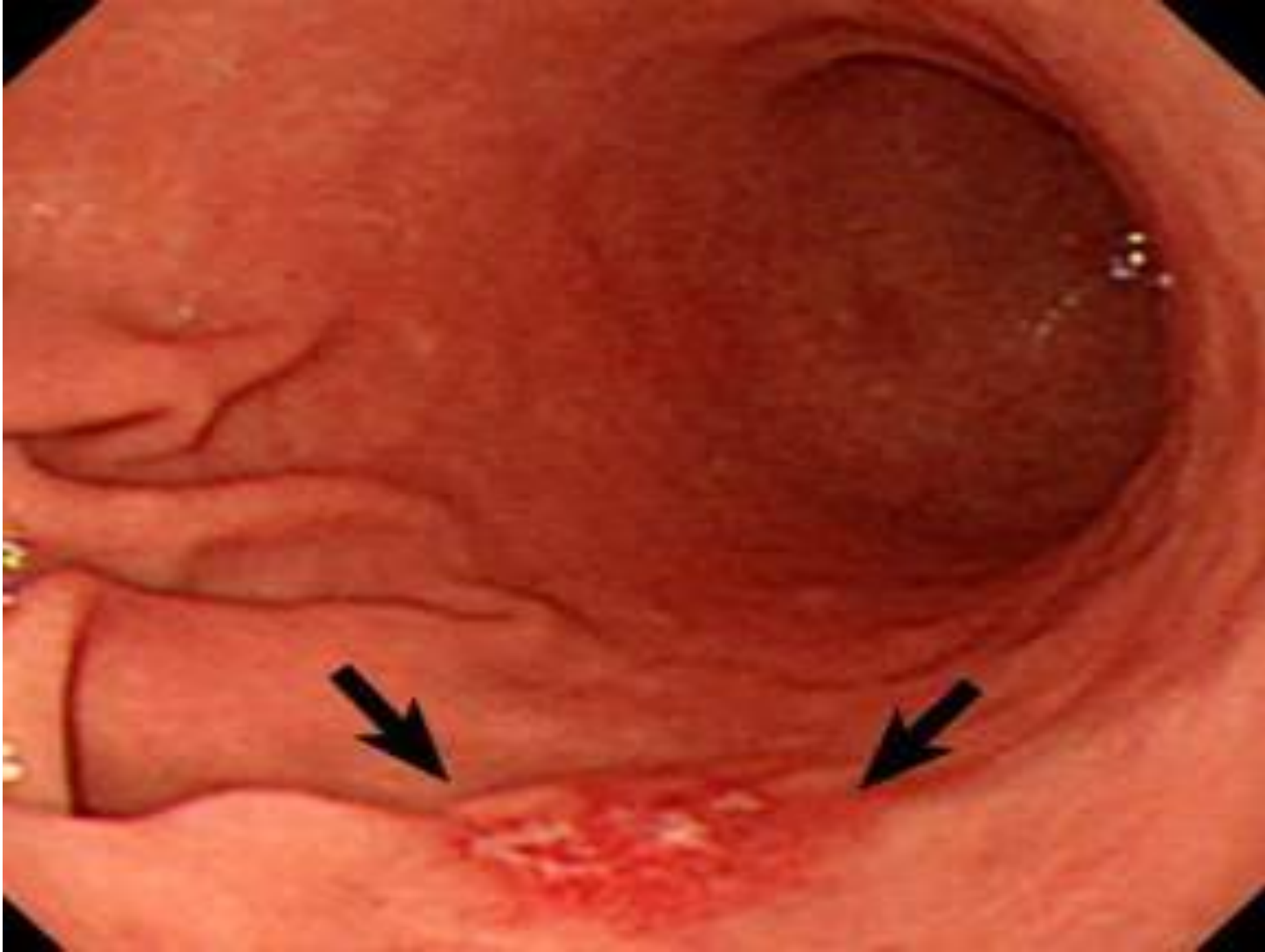
  (FIVE CAUSES)

- **Vomiting:**

  OBSTRUCTION

PEPTIC ULCER

- Esophagus
- Duodenum
- Stomach
- Jejunum after surgical construction of agastrojejunostomy
- Ileum in relation to ectopic gastric mucosa in Meckles diverticulum



Introduction

- Men are affected three times as often as women
- Duodenal ulcers are ten times more common than gastric ulcers in young patients
- In the older age groups the frequency is about equal

DUODENAL ULCER

- Epigastric area, mid-day, noon,night
- Relieved by food
- Normal or increased acid secrtion
- Common in young – middle age male
- 95% in duodenal bulb (2cm)
- 90% principle cause is H pylori (GNCB aeroph)

GASTRIC ULCER

- Epigastric area pain
- Increase by food
- Common in 40-60 years male
- 95% along lesser curve , (where is the Incisura
- Types :

- Type 1 : in incisura angularis & normal acid
- Type 2: prepyloric and DU & high acid
- Type 3: antrum duo to NSAID
- Type 4: at GEJ

Diagnosis

- Epigastric area pain and tenderness
- EGD
- Gastric analysis (basal vs maximal)
- Gastrin serum level (severe or refractory)
- Contrast meal (show complication)

TREATMENT

- Medical Treatment (80% in 6 weeks)

  -H2 antagonsis (zantac……)

  - Proton pump inhibetors (omperazol…..)

  - H.pylori eradication (amoxicillin , clarithro..)

- Surgical Treatment

I. Vagotomy

II. Antrectomy and vagotomy

III. Subtotal gastrectomy

Complications of surgery for peptic ulcer

- Early Complications (leakage, bleeding, retension)
- Late Complications

1. Recurrent ulcer (marginal ulcer, stomal ulcer ,anastomotic ulcer)
2. Gastrojejunocolic and gastrocolic fistula
3. **Dumping syndrome**
4. Alkaline gastritis
5. **Anemia** (Iron defi and vitB12 …)
6. Postvagotomy diarrhea
7. Chronic gastroparesis

ZOLLINGER-ELLISON SYNDROME (Gastrinoma)

- Peptic ulcer disease (often severe) in 95%
- Gastric hypersecretion
- Elevated serum gastrin
- Single one is malignant
- Multiple is benign (MEN 1)
- GASTRIN LEVEL IS MORE THAN 500 pg/ml
- C T Scan, somatostatin scan
- Portal vein blood sample

Treatment

- Medical Treatment
- Surgical Treatment

Diagnosis

- Epigastric tendereness
- EGD
- Contrast swallow

Ulcer complication (Perforation)

- Sudden, Severe, Steroid-related diffuse abdominal pain
- Presents as ACUTE ABDOMIN CLINICAL SIGNS (REGIDITY VS GUARDING)
- Mangment is ABC, then, NPO, IVF, NGT, FC, and erect abdominal X-ray (**NEVER DO EGD**)
- Defnitive one is surgical repair (Graham patch)

PERFORATED PEPTIC ULCER

- Locate anteriorly
- High risk : female, old age, gastric one
- Acute presentation
- X-ray: free air (85%) & fill 400 cc air by NGT
- Treatment : NGT, ABS, Surgery

Ulcer complication (**Obstruction**)

- Symptom is Vomiting, +/- weight loss, not bilish-color
- Clinically: no abdominal distension, gastric splash
- Diagnosis : ch. History, non-cooperative pt, smoker
- Investigation : abdominal X-ray, EGD, contrast swallow
- Treatment: R/O malignancy, possible resection vs bypass

UPPER GASTROINTESTINAL HEMORRHAGE

- Hematemesis
- Melena
- hematochezia

Causes of massive upper gastrointestinal hemorrhage

	Relative Incidence	
Common causes		45%
peptic ulcer	25%	
Duodenal ulcer	20%	
Gastric ulcer		
Esophageal varices		20%
Gastritis		20%
Mallory-Weiss syndrome		10%
Uncommon causes		5%
Gastric carcinoma		
Esophagitis		
Pancreatitis		
Hemobilia		

MALLORY-WEISS SYNDROME

- 10% of UGIB
- 1-4cm longitudinal tear in gastric mucosa at EGJ
- Forceful vomiting
- EGD
- 90% bleeding stops spontaneously by cold gastric wash, EGD- cautery, surgery

STRESS GASTRODUODENITIS, STRESS ULCER & ACUTE HEMORRHAGIC GASTRITIS

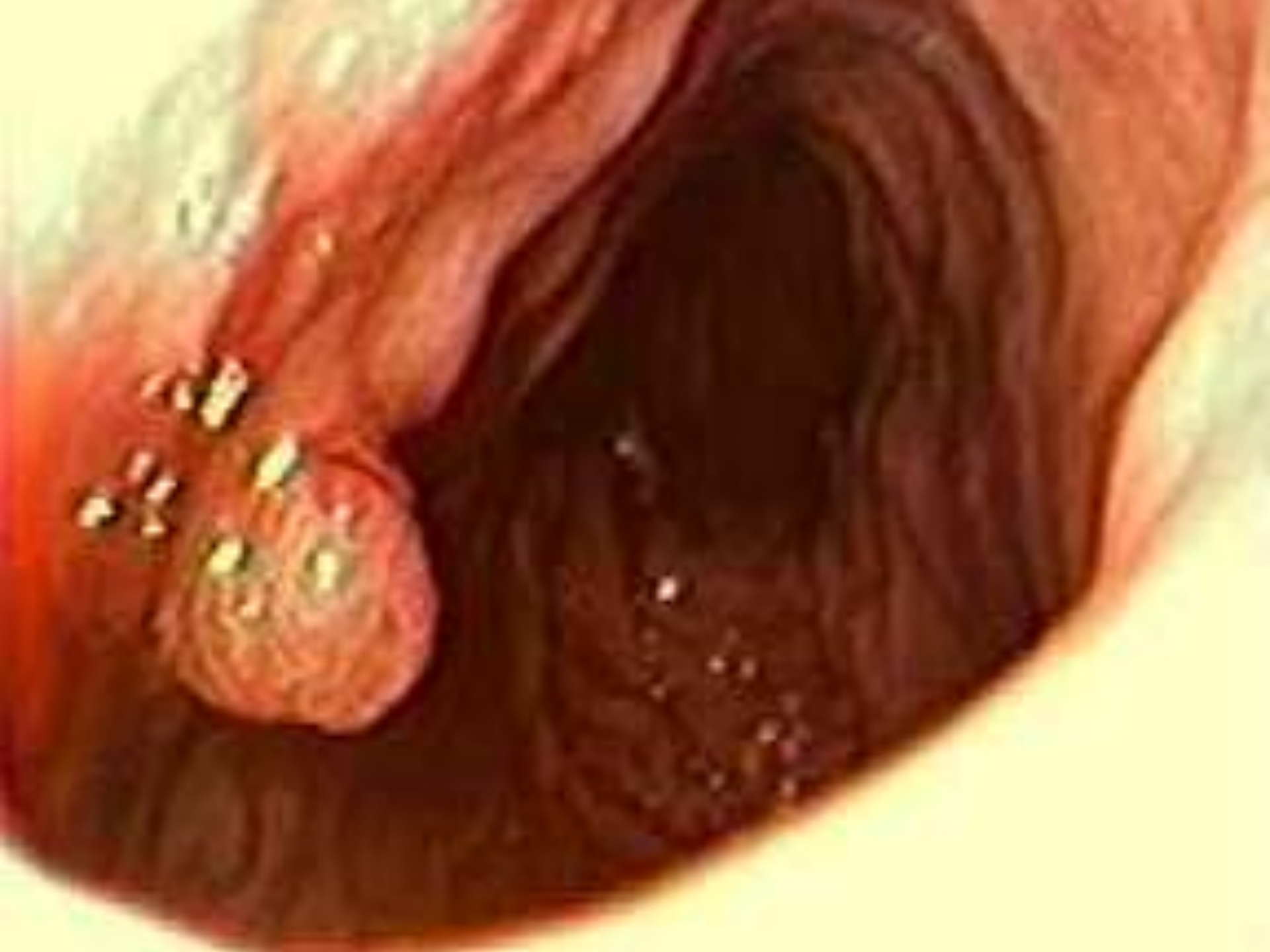
- Stress Ulcer -----shock &sepsis
- Curling's ulcers----burns
- Cushing's Ulcer ----CNS tumor, injury (more to perforates, high acid production
- Acute Hemorrhagic Gastritis

GASTRIC POLYPS

- Types :
  - Hyper plastic
  - Adenomatous
  - Inflammatory
  - Hamartomatus
- Affecting distal stomach
- Presentation is mainly incidental finding , rarely by anemia
- EGD
- R/O malignancy

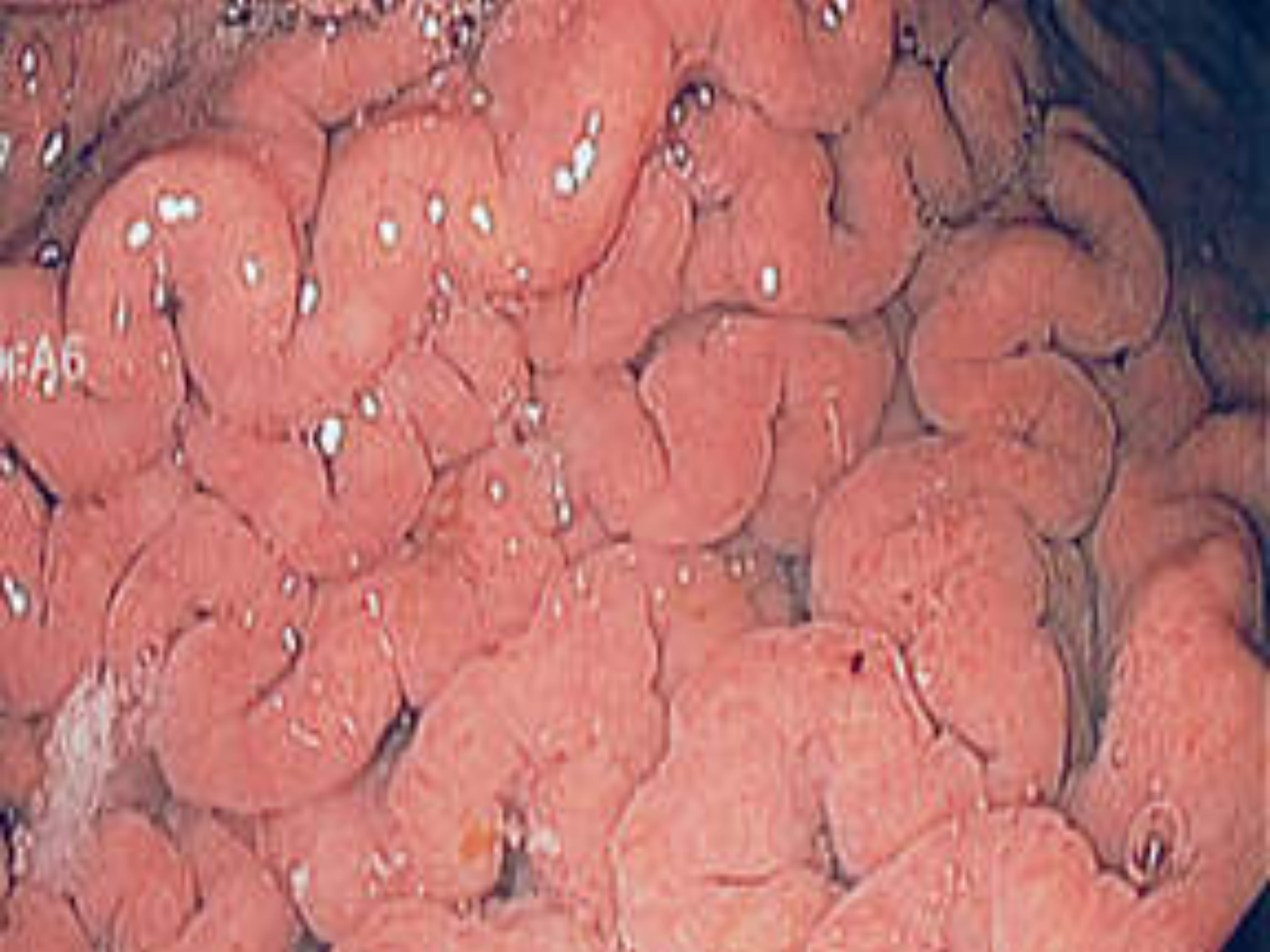
GASTRIC LEIOMYOMAS

- Common submucosal growth
- Asymptomatic & massive bleeding
- EGD & CT Scan
- Do not biopsy
- Surgical wide excision



MENETRIER'S DISEASE

- Giant hypertrophy of the gastric rugae
- Present with hypoproteinemia
- Edema, diarrhea, weight loss
- Treatment : atropine, omperazole, H,pylori eradication …..rarely is gastrectomy



PROLAPSE OF THE GASTRIC MUCOSA

- Occasionally accompanies small gastric ulcer
- Vomiting and abdominal pain
- X-ray : antral folds into duodenum
- Antrectomy with Billroth 1

GASTRIC VOLVULUS

- Its longitudinal axis(organo-axial volvulus):

  - More common

  - Associated with HH

- Line drawn from the mid lesser to the mid greater curvature(mesenterioaxial volvulus)
- Present with :
- Severe abdominal pain and Brochardt"s triad

Brochardt's triad

1. Vomiting followed by retching and then inability to vomit
2. Epigastric distention
3. Inability to pass a nasogastric tube

GASTRIC DIVERTICULA

- Uncommon
- Asymptomatic
- Weight loss, diarrhea
- EGD, X-ray
- ?? surgery

BEZOAR

- Concretions formed in the stomach
- Types:

  - Trichobezoars: hair

  - Phytobezoars: vegtab
- Presentation by obstruction
- EGD, X-RAY
- SURGICAL REMOVAL

DUODENAL DIVERTICULA

- 20% OF POPULATION
- Asymptomatic
- 90% medial aspect of the duodenum
- Rare before 40 years of age
- Most are solitary and 2.5 cm peri-ampullary of vater

Benign Duodenal Tumors

- Brunner's gland adenomas
- Carcinoid tumors
- Heterotopic gastric mucosa
- Villous adenomas

SUPERIOR MESENTERIC ARTERY OBSTRUTION OF THE DUODENUM

- Obstruction of the third portion of the duodenum -- compression SMA and Aorta
- Appears after rapid weight loss following injury
- Distance between two vessels is 10-20 mm

- Proximal bowel obstruction symptoms and signs
- C T Scan
- bypass

REGIONAL ENTERITIS OF THE STOMACH & DUODENUM

- Food poising
- Pain and diarrhea
- Clinical DX
- observation

OTHER NON-NEOPLASTIC LESIONS OF THE STOMACH