GASTRIC OUTLET OBSTRUCTION AND ITS SURGICAL MANAGEMENT

DEFINITION

Gastric Outlet Obstruction is clinical or pathophysiological consequence of any disease process that produces mechanical impediment to gastric emptying

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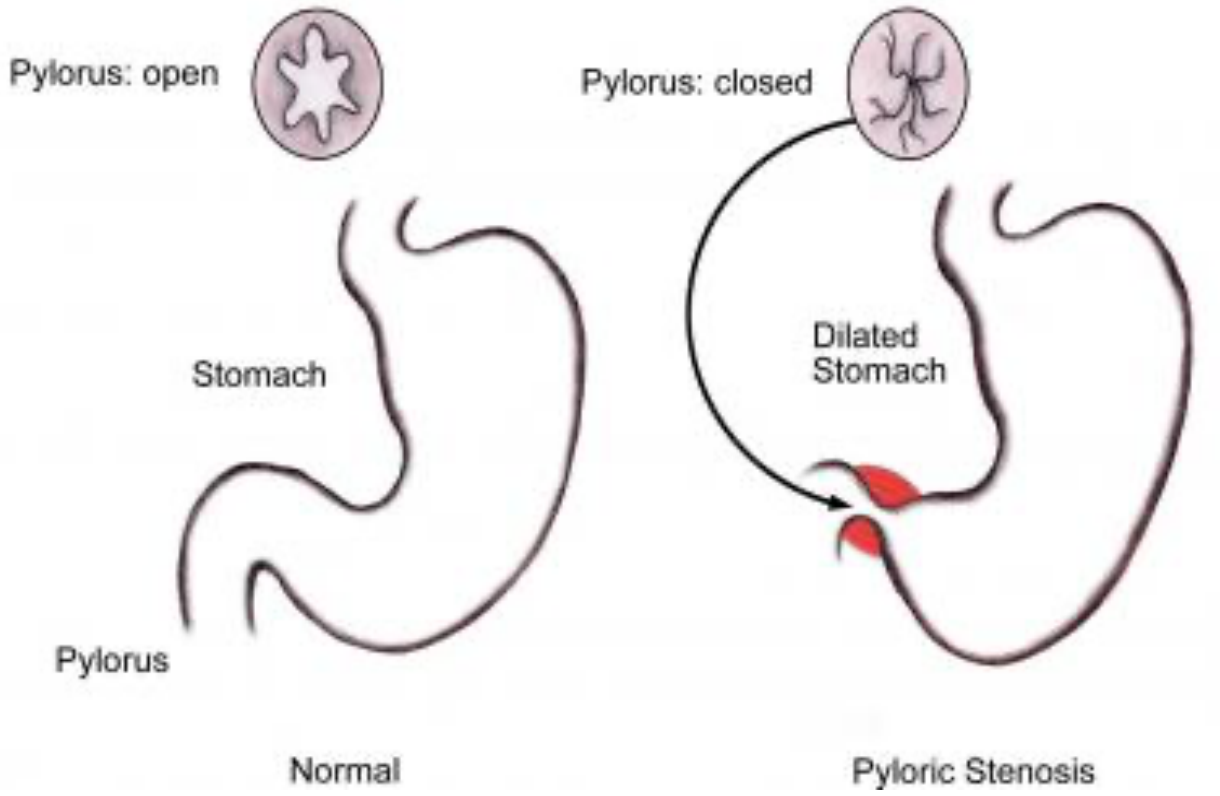
Gastric Outlet Obstruction



Etiology

BENIGN

- Peptic Ulcer disease
- Ingestion of Caustics
- Trichobezoars (Hairballs)
- Adult hypertrophic Pyloric stenosis
- Pyloric mucosal diaphragm
- Pancreatic Pseudocysts

BARIATRIC PROCEDURES •

Vertical banded gastroplasty •

Roux-en-Y gastric bypass •

ETIOLOGY

- **MALIGNANT**
- Carcinoma of Stomach
- Periampullary carcinomas
    - Carcinoma Head of pancreas
    - ampullary carcinoma
    - Carcinoma of second part of duodenum
    - cholangiocarcinomas

PRESENTATION

- **HISTORY**

  Epigastric or left hyochondrial pain

  > which is most common feature in peptic ulcer disease

  vomiting

  >unpleasant smell

  > copious amounts

  >projectile

  >NON BILIOUS

  >contains undigested food particles taken hours to several days ago

History

- Feeling of unwell
- Anorexia
- Nausea
- Early satiety
- Weight loss
- Abdominal swelling

EXamination

- **GENERAL PHYSICAL EXAMINATION**

Chronically ill looking patient •

Wasted •

Dehydrated •

Pale •

Left supraclavicular lymphadenopathy (with malignant obstruction) •

Examination

- ABDOMINAL

Distended stomach (fullness in epigastrium) •

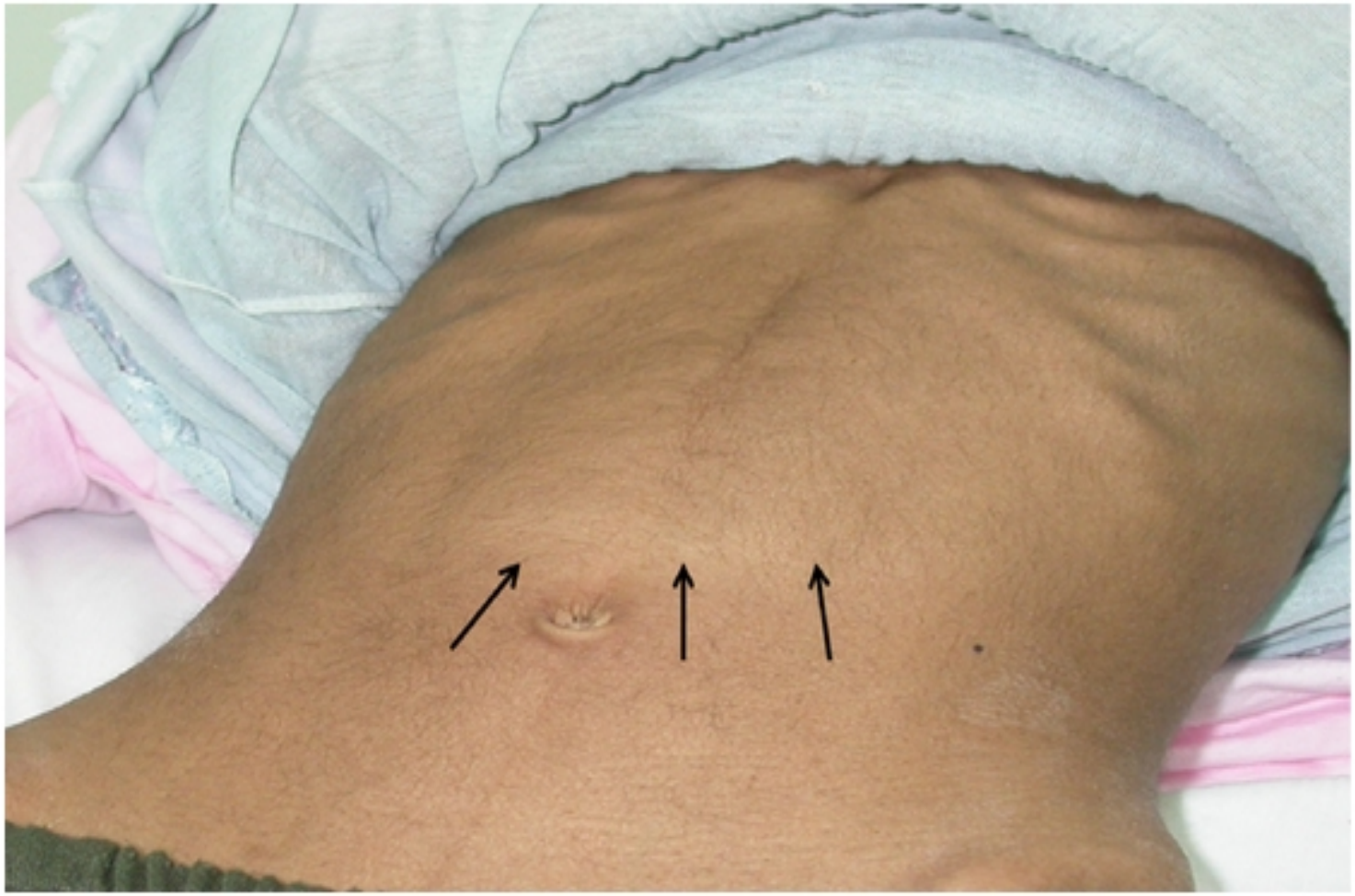
Visible Gastric Peristalisis •

- Succussion splash

Hepatosplenomegally •

Look for Ascities (sign of Carcinoma spread) •

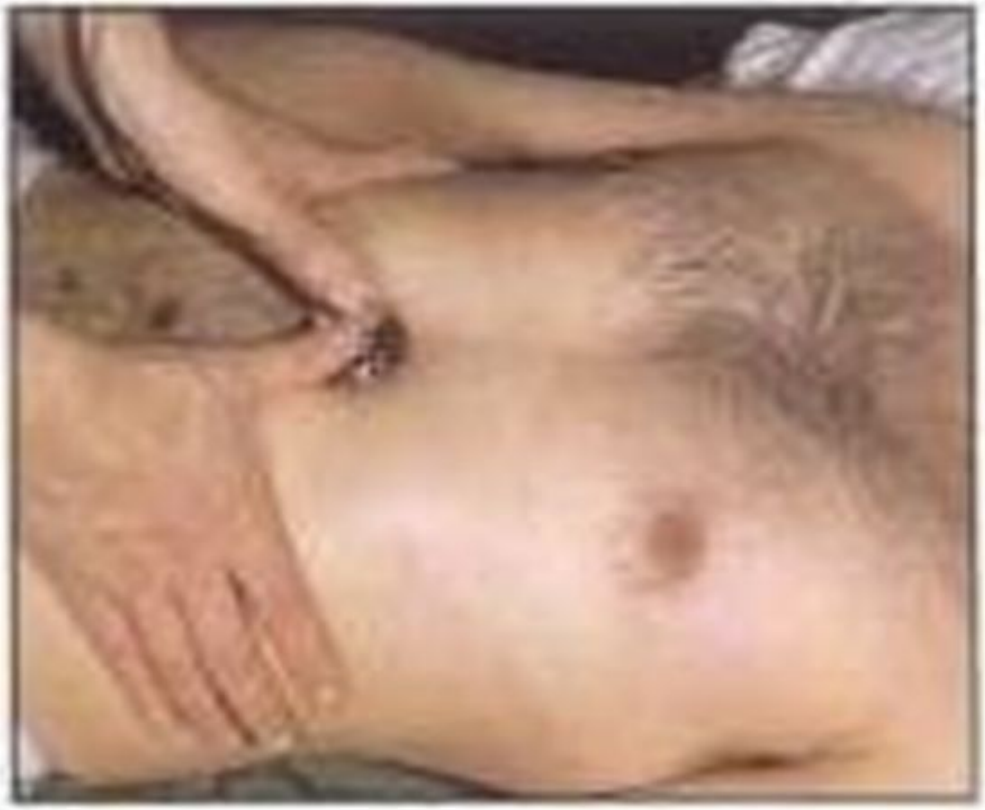
Epigastric fullness



Succussion splash

- Sloshing sound heard through stethoscope place over epigastrium during sudden movement of the patient

Succussion Splash



If you suspect obstruction of the pyloric outlet, check for a 'succussion splash' by simultaneously listening in the epigastrium and shaking the upper abdomen from side to side.

INVESTIGATIONS

CBC

S/E

LFT

Test for H pylori

Investigations

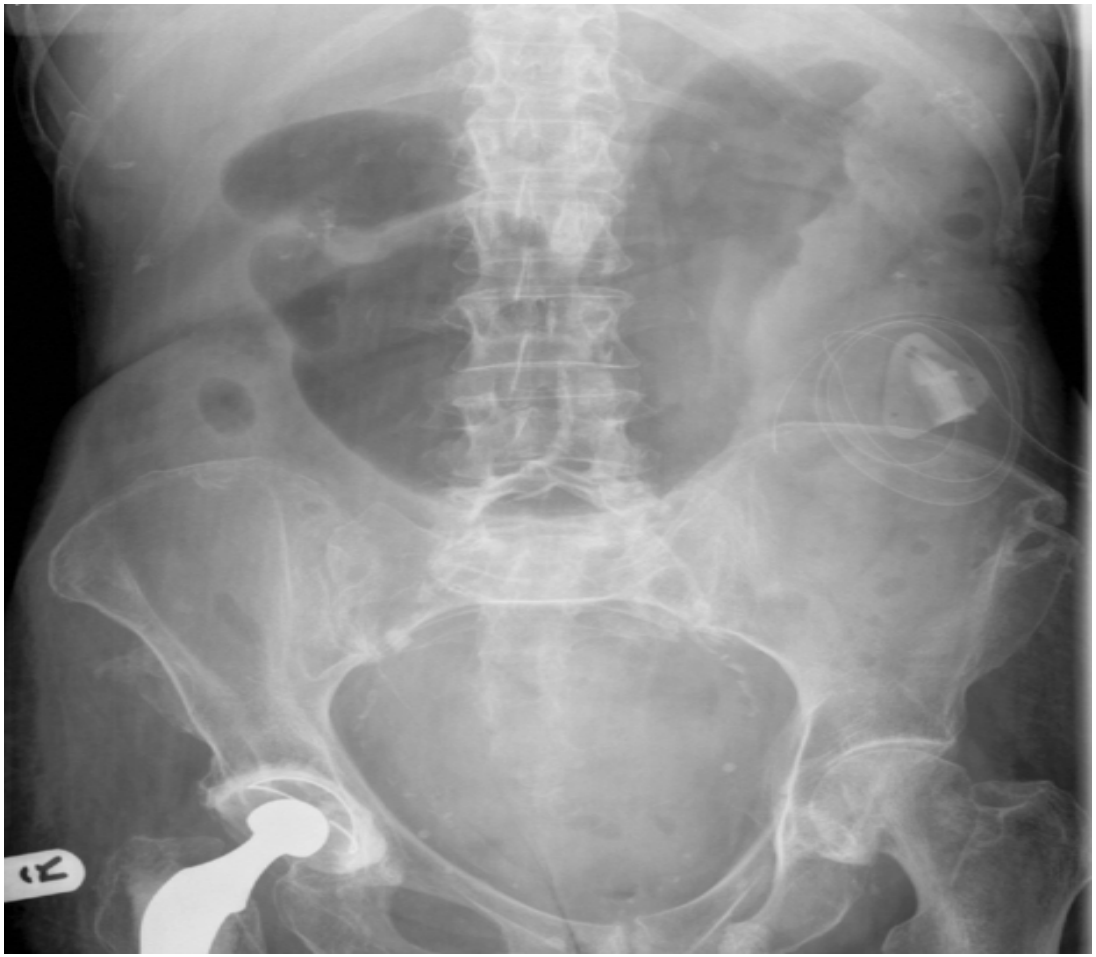
- ABG s : Metabolic Alkalosis
- Urine C/E: paradoxical aciduria

Radiology

Plane Xray Erect Abdomen: •

Large Gastric shadow and Large amount of Gastric fluid

Plane Xray Abdomen

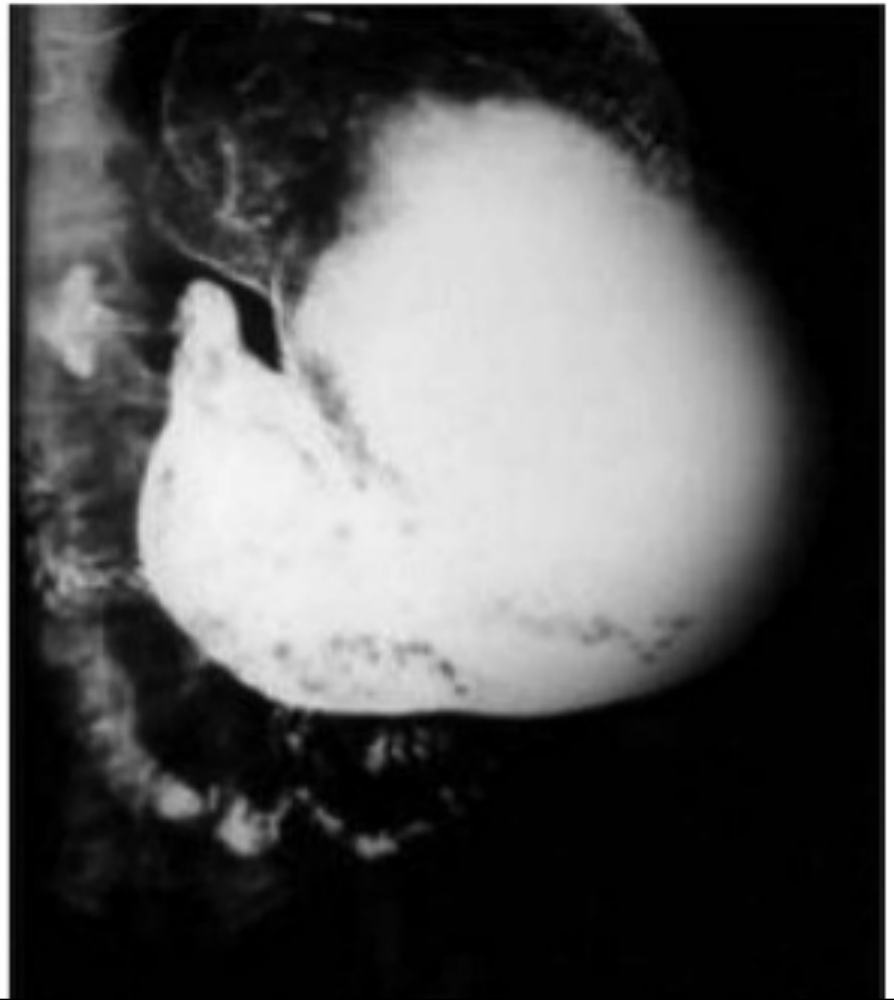


Barium Meal

- 6 hour peroid of fasting is observed prior to study
- Barium sulphate is ingested by the patient
- Xray images are taken at 20 to 30 minutes interval in supine position

Barium meal

Contrast study demonstrating an enlarged stomach. The point of obstruction is visualized at the pyloric-duodenal junction (string sign).

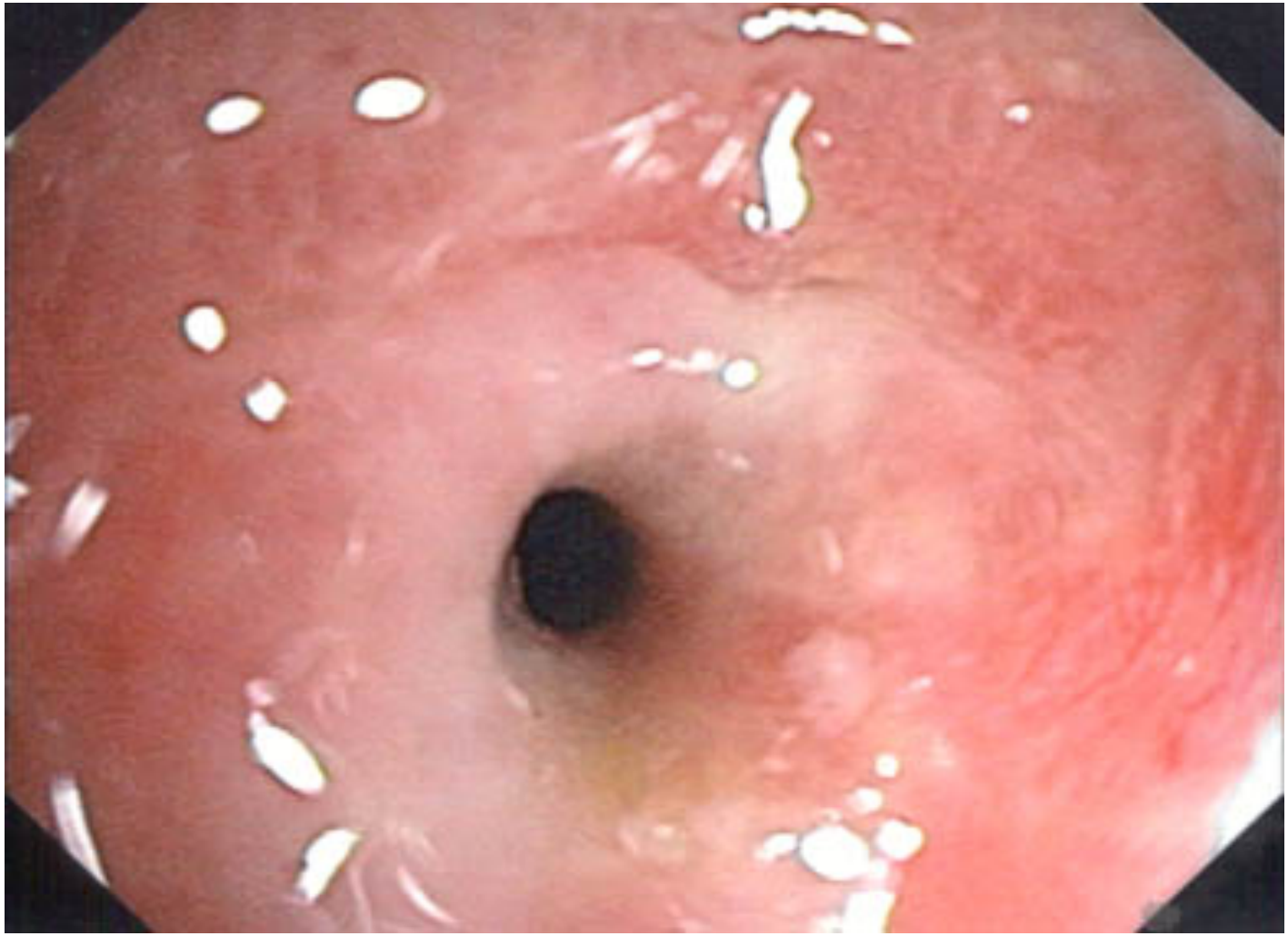


Upper GI endoscopy

visualize Gastric Outlet

Biopsy

Gastric outlet obstruction



CT scan

- For extraluminal obstruction
- Periampullary carcinomas

Management

- Two Aims

1. Correct metabolic abnormality
2. Deal with mechanical obstruction

Correcting Metabolic Abnormalities

- Pass double large Bore IV line
- Pass wide bore nasogastric tube to empty the stomach
- Sometimes an orogastric tube is required to lavage and empty the stomach as nasogastric tube may not be sufficiently large to deal with contents of the stomach

Correcting metabolic abnormalities

- Intravenous Normal Saline (0.9% NaCl) with Potassium Supplementation
- Correct anemia

management

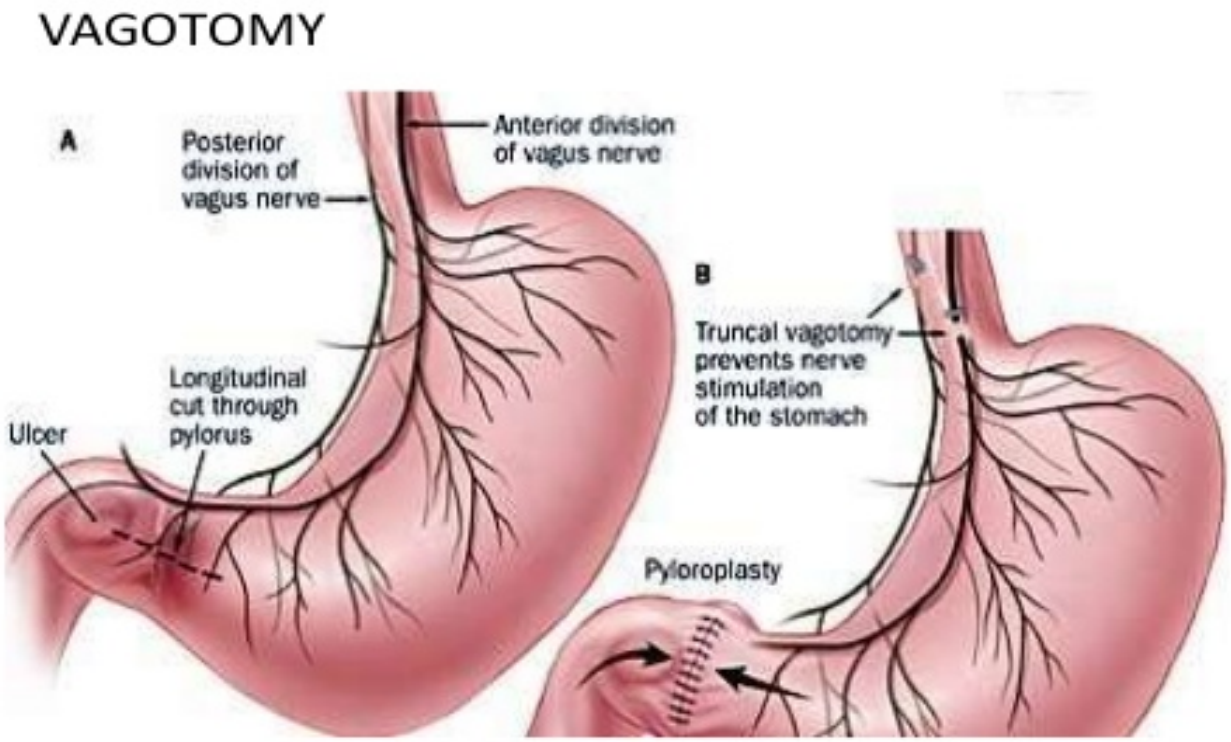
- Early cases may settle with conservative management
- NPO
- ANTACIDS
- PPI
- as the edema around the ulcer diminishes as the ulcer is healed

Surgery for benign GOO

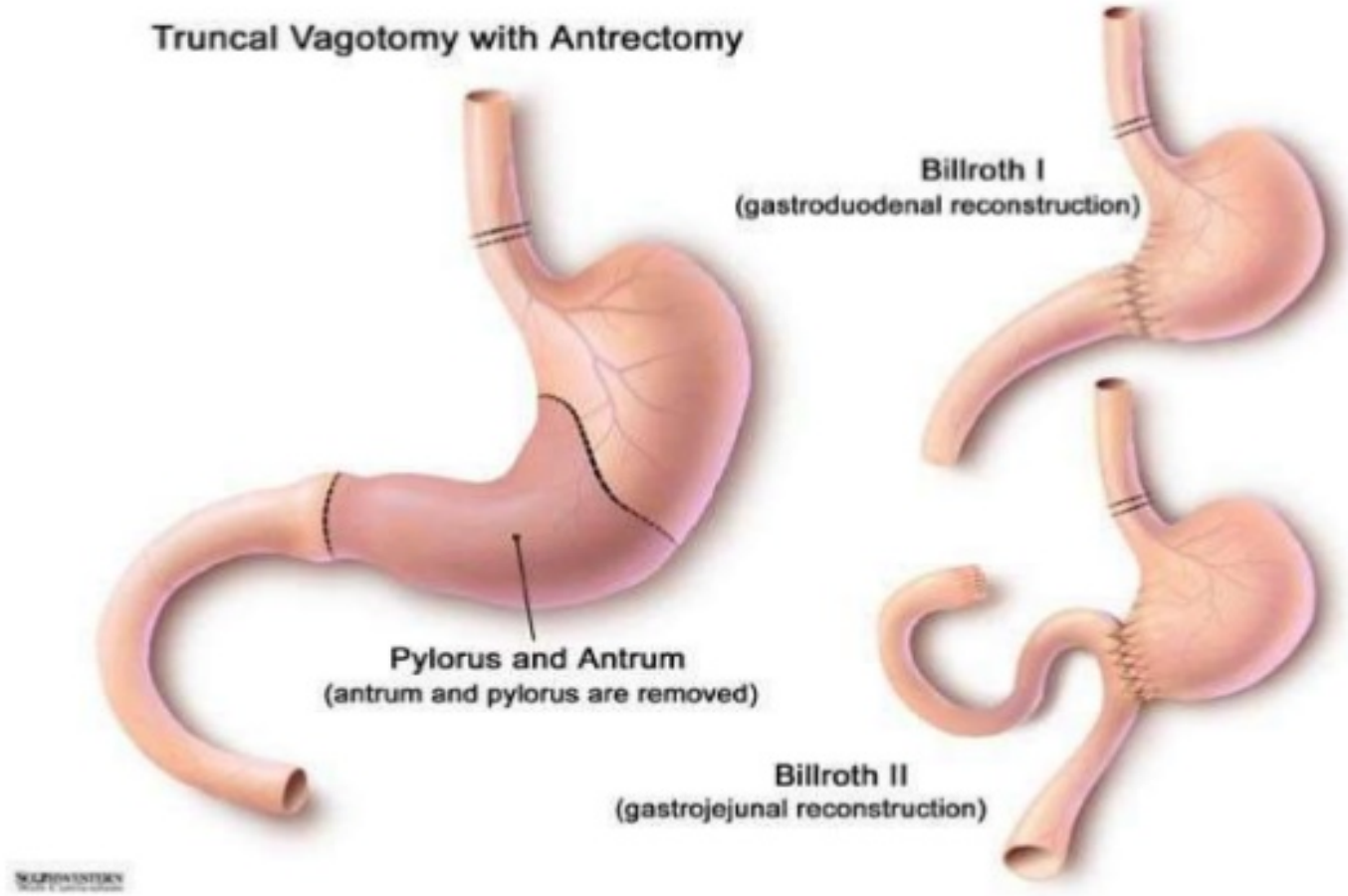
The most common surgical procedures performed for GOO related to PUD are

- Vagotomy and antrectomy,
- Vagotomy and pyloroplasty,
- Truncal vagotomy and gastrojejunostomy,
- Pyloroplasty,
- Laparoscopic variants of the aforementioned procedures.
- Vagotomy and antrectomy with Billroth II reconstruction (gastrojejunostomy) seem to offer the best results.
- Vagotomy and pyloroplasty and pyloroplasty alone, although used with some success, can be technically difficult to perform due to scarring at the gastric outlet.

Pyloroplasty with vagotomy

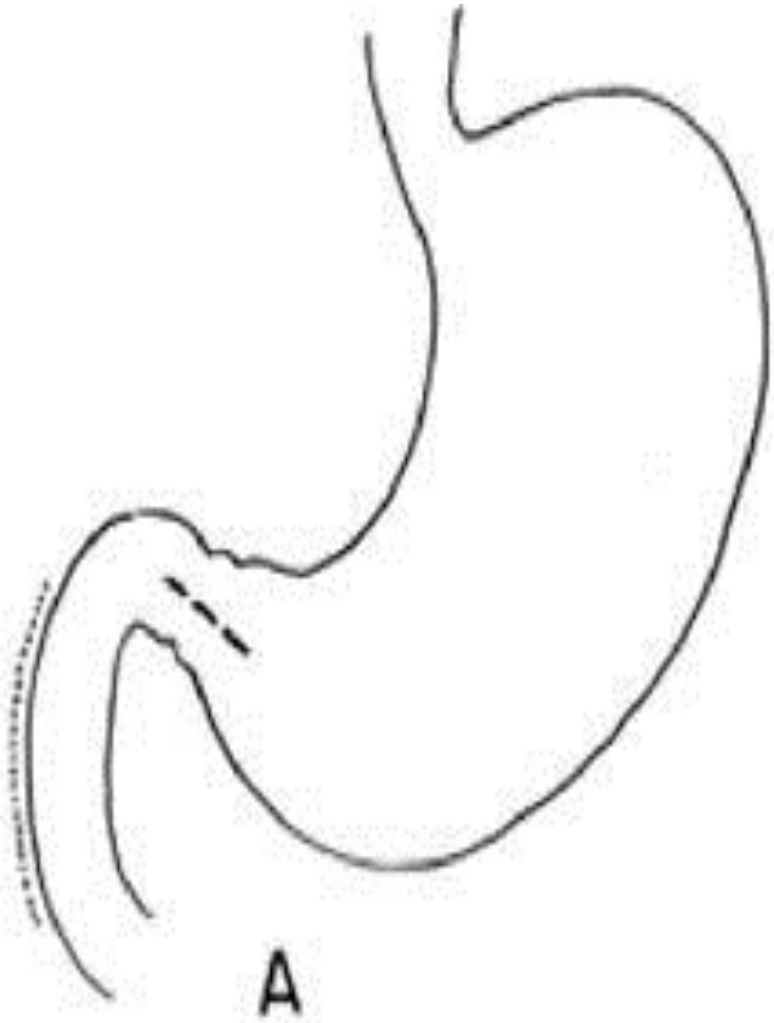


Truncal Vagotomy and Antrectomy and Billroth Reconstructions



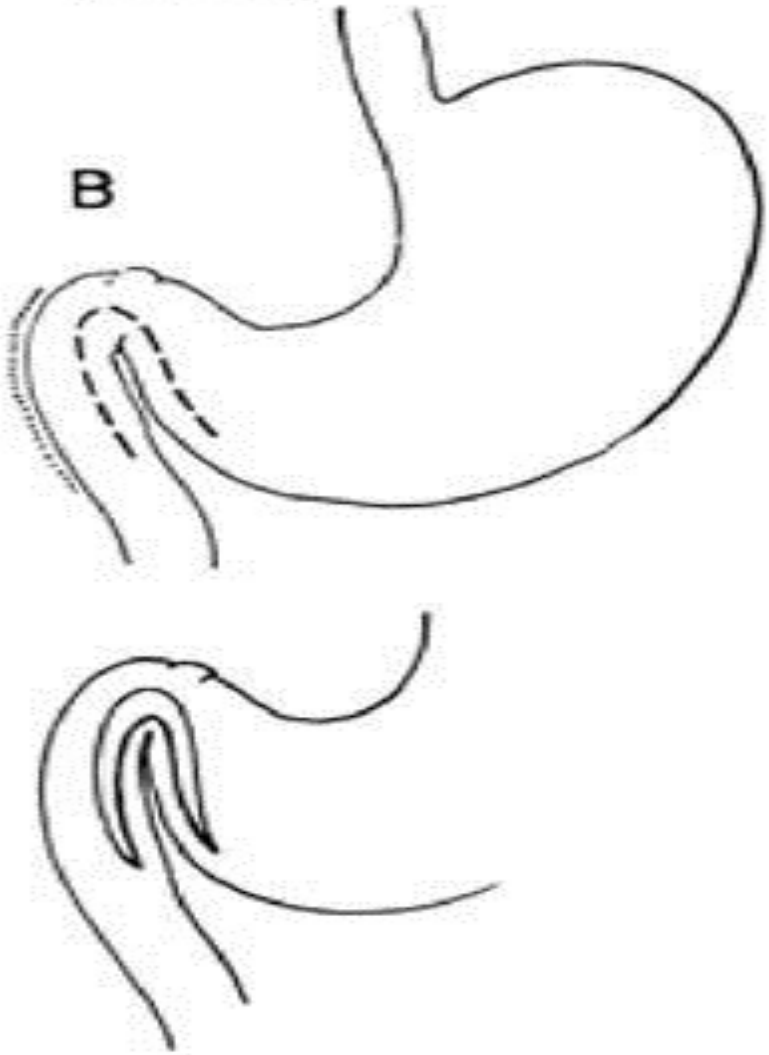
PYLOROPLASTY

- FINEY
- JABOULEYS
- Heineke-Mikulicz

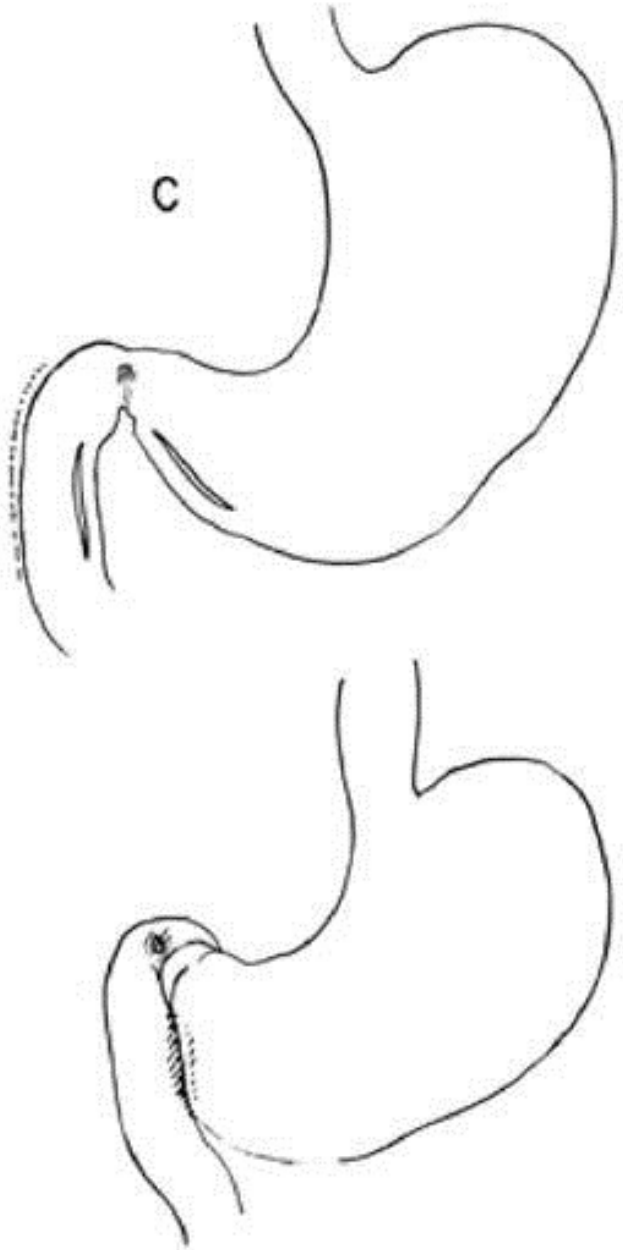


Heineke – Mikulicz

Finney



Jaboulay



GASTROJEJUNOSTOMY

BALLOON DIALATATION

- ENDOSCOPIC DALATION
- Repeated dilatations needed
- May cause perforation

Endoscopic stenting for unresectable tumor

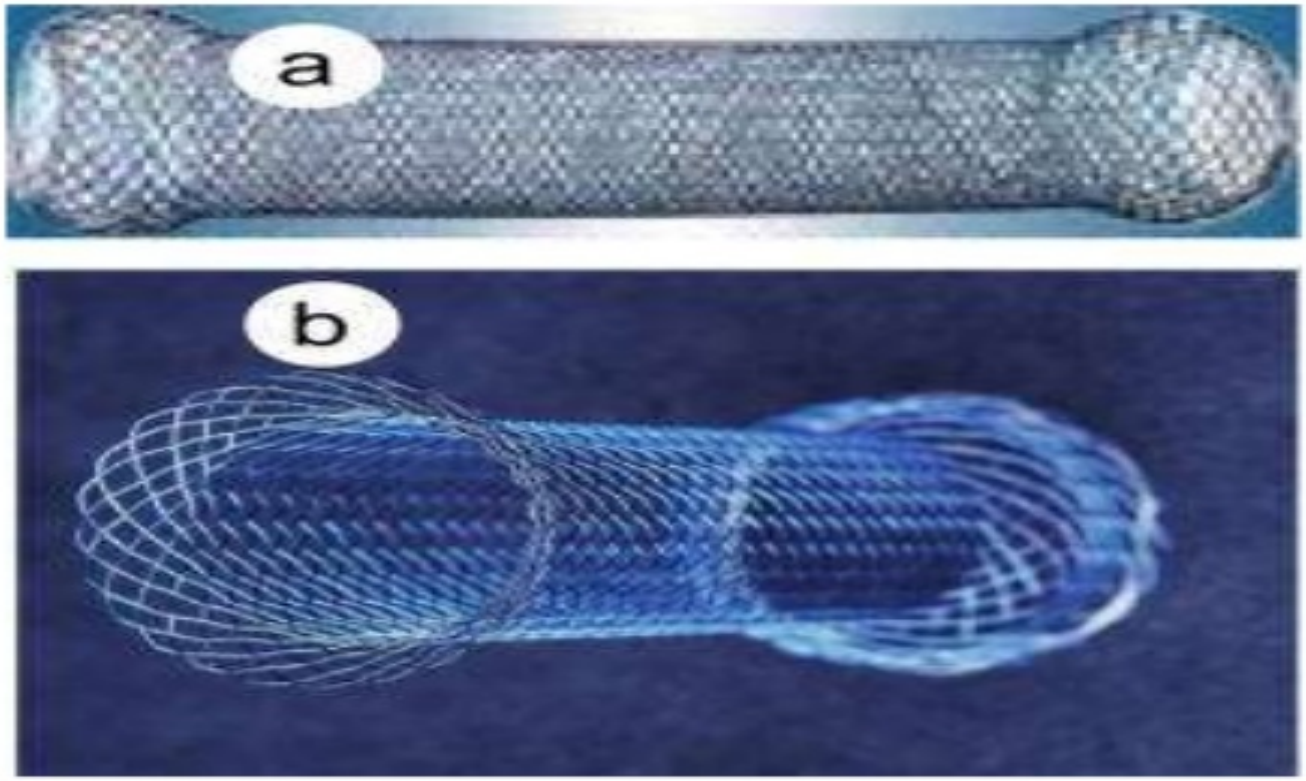
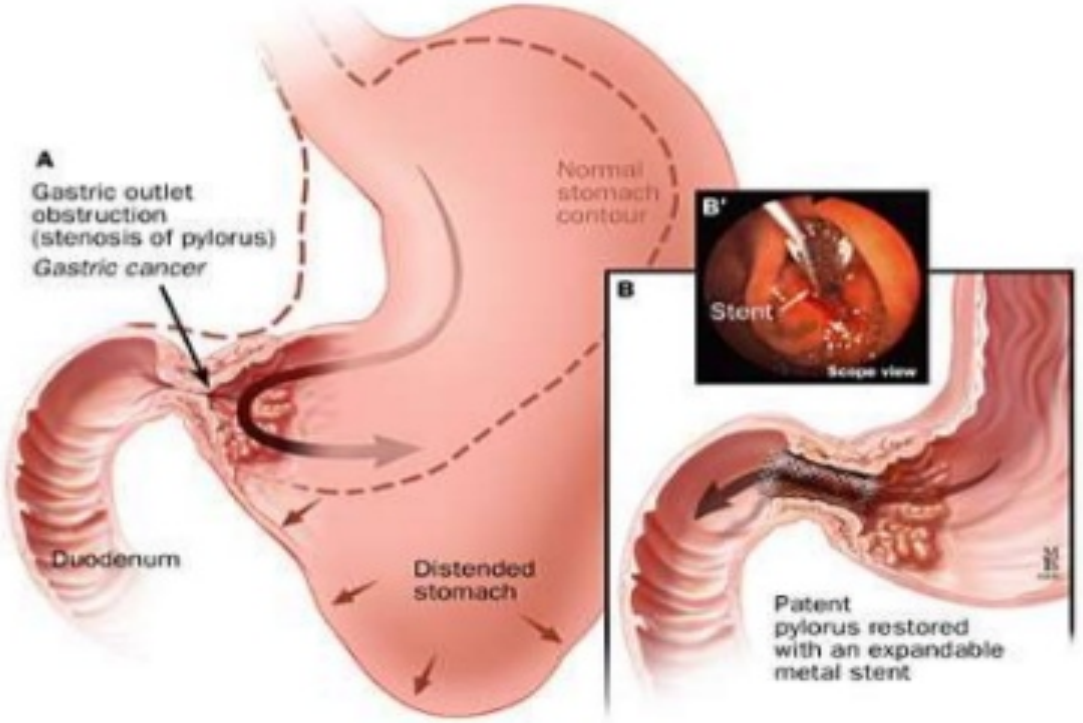


Figure 1. Stents used . a, Duodenal stent; b, pylorus stent

stenting


A
Gastric outlet obstruction (stenosis of pylorus)
Gastric cancer
Normal stomach contour
Duodenum
Distended stomach
B'
Stent
Scope view
B
Patent pylorus restored with an expandable metal stent