



# Peptic Ulcer

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## Peptic Ulcer

- Peptic ulcers result from the corrosive action of acid gastric juice on a vulnerable epithelium.
- They may occur in esophagus, duodenum, stomach itself, jejunum.
- 2% of adult population in the USA suffers from active peptic ulcer disease, and about 10% of the population will have the disease during their lifetime.
- Men are affected 3 times as often as women.
- Duodenal ulcers are ten times more common than gastric ulcers in young patients, but in older age groups the frequency is about equal.

## The ulcerative process can lead to 4 types of disability:

- 1- Pain (the most common).
- 2- Bleeding.
- 3- Perforation.
- 4- Obstruction.

## Duodenal Ulcer:

### Essential of Diagnosis:

- Epigastric pain relieved by food or antacids.
- Epigastric tenderness.
- Normal or increased gastric acid secretion.
- Signs of ulcer disease on upper gastrointestinal x-rays or endoscopy.
- Evidence of *Helicobacter pylori* infection.



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### General Considerations:

- Young and middle-aged (20-45 years).
- About 95% of duodenal ulcers are situated within 2cm of the pylorus, in the duodenal bulb.
- *H. pylori* as the principal cause of duodenal ulcer disease.
- *H. pylori* infection resulting from public health factors.
- Gastric acid secretion is characteristically higher than normal in patients with duodenal ulcer.

### Clinical Findings:

A. Symptoms and Signs.

B. Endoscopy.

C. Diagnostic Tests:

1- Gastric analysis.

2- Serum gastrin.

D. Radiographic Studies.

### Differential Diagnosis:

- 1- Chronic cholecystitis.
- 2- Acute pancreatitis.
- 3- Chronic pancreatitis.
- 4- Functional indigestion.
- 5- Reflux esophagitis.



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## Complications:

- 1- Hemorrhage.
- 2- Perforation.
- 3- Duodenal obstruction.
- 4- Pancreatitis.
- 5- Biliary obstruction.

## Treatment:

### A. Medical Treatment:

- The goals of medical therapy are:
  - 1) To heal the ulcer and
  - 2) To cure the disease.
- Treatment in the first category is aimed at decreasing acid secretion on neutralizing acid.

### B. Surgical Treatment:

- 1) Vagotomy.
- 2) Antrectomy and vagotomy.
- 3) Subtotal gastrectomy.

## **Complications of surgery for Peptic Ulcer:**

### A. Early complications:



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## B. Late complications:

- 1) Recurrent ulcer (marginal ulcer, stomal ulcer, anastomotic ulcer).
- 2) Gastro-jejuno-colic and gastro-colic fistula.
- 3) Dumping syndrome.
- 4) Alkaline gastritis.
- 5) Anemia.
- 6) Post-vagotomy diarrhea.
- 7) Chronic gastro-paresis.

## **Gastric Ulcer:**

### Essentials of Diagnosis:

- Epigastric pain.
- Ulcer demonstrated by x-ray.
- Acid present on gastric analysis.

### General Considerations:

- Gastric ulcer is in patients aged 40-60 years.
- 10 years older than average of those with duodenal ulcers.
- 95% of gastric ulcers are located on the lesser curvature, and 60% of these are within 6cm of the pylorus.



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## Types:

### Type *I* ulcers:

- the most common variety.
- gastric acid output is normal or low.
- ulcers usually located within 2cm between parietal cell and pyloric mucosa.
- 95% are on the lesser curvature, near the incisura angularis .
- Antral gastritis

### Type *II* ulcers:

- located close to the pylorus (pre-pyloric ulcers)
- occur in association with duodenal ulcers
- risk of cancer is very low in this type of ulcer

### Type *III* ulcers:

- occur in the antrum as result of chronic use of non-steroidal anti-inflammatory agents
- difficult to distinguish from benign ulcer
- 50-75% chance of cure after gastrectomy

## Clinical Findings:

- A. Symptoms and Signs
- B. Gastroscopy and Biopsy
- C. Imaging Studies



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### Treatment:

A. Medical Treatment:

B. Surgical Treatment:

- Distal hemigastrectomy (including the ulcer)
- Vagotomy and pyloroplasty

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