

PEPTIC ULCER(PATHOLOGY)

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- Peptic ulcer are the areas of degeneration and necrosis of gastrointestinal mucosa exposed to acid peptic secretions.
- It can occur at any level of alimentary tract that is exposed to hydrochloric acid and pepsin. They occur most commonly in duodenum and the stomach.

- **Acute peptic (stress)ulcers**

It is multiple small mucosal erosions seen most commonly in the stomach but occasionally involving duodenum.

- **Etiology**

- ✓ Psychological stress
- ✓ Physiological stress
 - Shock
 - Severe trauma
 - Septicemia
 - Intracranial lesion
 - Extensive burns
 - Drug intake eg. steroids, aspirin
 - Local irritants eg. Alcohol, smoking, coffee

- **Chronic peptic ulcers** (Gastric and duodenal ulcers)

Etiology

- ✓ H.Pylori in antrum
- ✓ NSAID induced mucosal injury
- ✓ Acid pepsin secretions
- ✓ Gastritis
- ✓ Other local irritants like spicy food, cigarette smoking, alcohol

- ✓ Dietary factors –nutritional deficiencies
- ✓ Psychological factors
- ✓ Genetic factors
- ✓ Hormonal factors eg.endocrine secretions in hyperplasia and adenoma of parathyroid glands, adrenal cortex and anterior pituitary
- ✓ Miscellaneous – associated with chronic renal failure , COPD, Chronic pancreatitis, alcoholic cirrhosis

Clinical features

- Pain

In gastric ulcer epigastric pain occurs immediately or within 2hrs after food and never occurs at night. In duodenal ulcer, pain is severe at late night (hunger pain) and is usually relieved by food.

- Vomiting- duodenal ulcer patient rarely have vomiting

- Haematemesis and melaena
- Weight loss
- Deep tenderness

Gastric ulcer- midline of epigastrium

duodenal ulcer- right hypochondrium

- **Morphological features**

- Gastric ulcers are found predominantly along the lesser curvature in the region of pyloric antrum. More commonly on the posterior than the anterior wall
- Duodenal ulcers are found in first part of duodenum usually immediate post pyloric ,more commonly on anterior than posterior wall.

- The ulcers are vary in depth from being superficial to deep ulcers.
- Majority of peptic ulcers are benign
- Malignant gastric ulcers are larger

- **Microscopically**

Chronic ulcers have 4 histological zones

1. Necrotic zone- lies in the floor of the ulcer and is composed of fibrinous exudates containing necrotic debris and few leukocytes.
2. Superficial exudative zone – lies underneath the necrotic zone

3. Granulation tissue zone- is seen merging into the necrotic zone
4. Zone of Cicatrisation –it is seen merging into the thicker layer of granulation tissue.

- **Complication**

1. Obstruction

2. Haemorrhage

3. Perforation

4. Malignant transformation