SNS COLLEGE OF ALLIED HEALTH SCIENCES

SNS Kalvi Nagar, Coimbatore - 35

Affiliated to Dr MGR Medical University, Chennai

DEPARTMENT OF PHYSICIAN ASSISTANT

COURSE NAME : GASTROENTEROLOGY

3RD YEAR

TOPIC : PANCREATITIS

PANCREATITIS

- Inflammation of the pancreatic parenchyma.
- Pancreatitis is commonly described as autodigestion of the pancreas

Types:

1. Acute Pancreatitis
2. Chronic pancreatitis

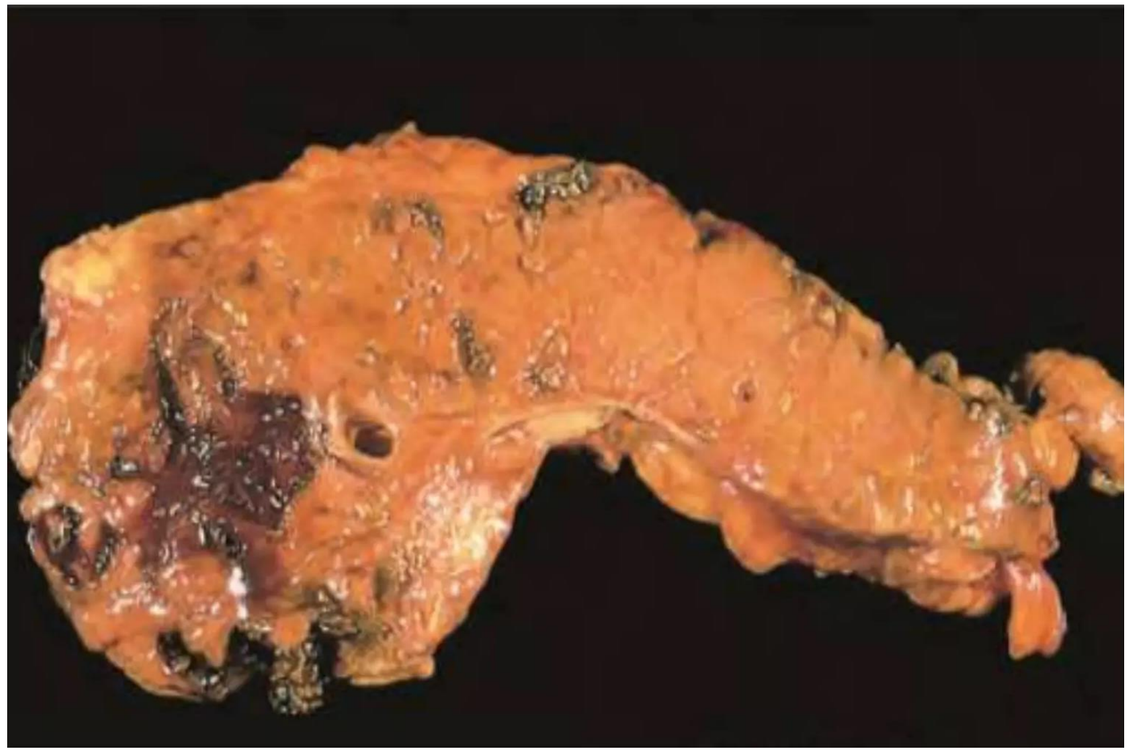
ACUTE PANCREATITIS

Definition:

- It is an acute inflammatory process of the pancreas.

- Reversible inflammation of the pancreas

- Ranges from mild to severe.



INCIDENCE

- Acute pancreatitis is most common in middle aged men and women.

- It affects male and female equally.

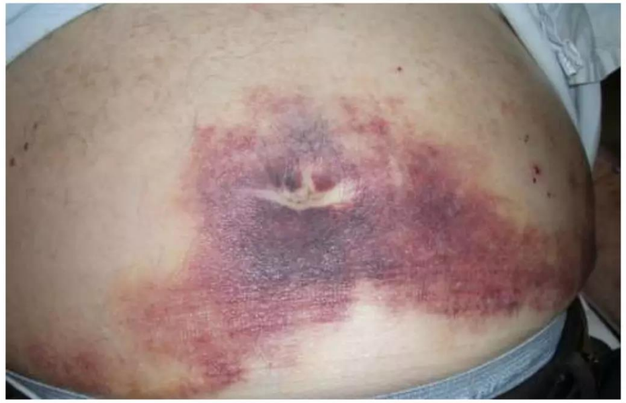
Symptoms

- Upper Abdominal pain, sudden onset, sharp, severe, continuous, radiates to the back, reduced by leaning forward.
- Generalized abdominal pain, radiates to the shoulder tips. Patient lies very still.
- Nausea, vomiting
- Anorexia
- Fever, weakness

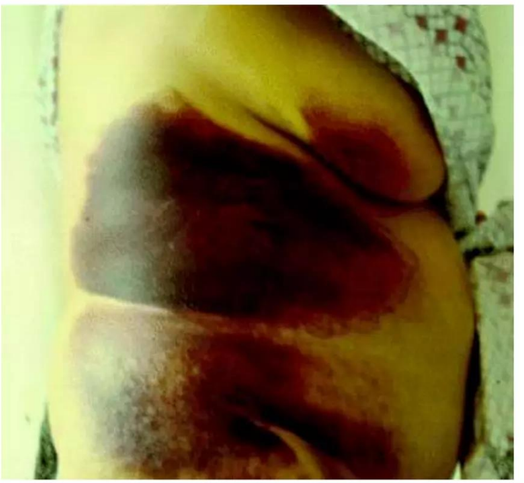
Signs

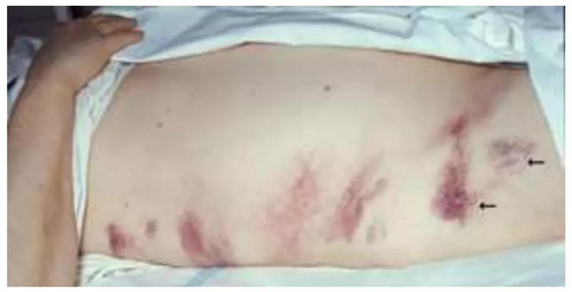
- Distressed, moving continuously, or sitting still
- Pale, diaphoretic. Confusion
- Low grade fever
- Tachycardia, Tachypnea
- Shallow breathing
- Hypotension
- Grey Turner's sign, Cullen's sign, Fox's sign
- Rebound tenderness, Rigidity
- Shifting dullness, reduced bowel sounds

Cullen's Sign



Grey Turner's Sign





Fox's Sign

Differential Diagnosis

- Perforated viscus (DU)
- Acute cholecystits, Biliary colic
- Acute intestinal obstruction
- Esophageal rupture
- Mesenteric vascular obstruction
- Renal colic
- Dissecting aortic aneurysm
- Myocardial infarction
- Basal pneumonia
- Diabetic ketoacidosis

Investigations

Blood tests:

- Complete Blood Count
- Serum amylase & lipase
- C-reactive Protein
- Serum electrolytes
- Blood glucose
- Renal Function Tests
- Liver Function Tests
- LDH
- Coagulation profile
- Arterial Blood Gas Analysis

Chronic Pancreatitis

- Chronic prolonged pancreatitis, is a continuous, inflammatory and fibrosing process of the pancreas.
- Progressively destroyed as it is replaced with fibrotic tissue.
- Strictures and calcification may also occur in pancreas
- Dilated
- Permanent loss of exocrine and endocrine function

Pathophysiology

- The 2 major types are chronic obstructive pancreatitis & chronic calcifying pancreatitis.

Clinical manifestation

- Upper abdominal pain
- Losing weight without trying
- Oily, smelly stools (steatorrhea)

Incidence

- Incidence - 3-10 / 1lakh population
- More common in men
- Middle aged > 40 yrs
- 2/3rds are alcoholics

Pathogenesis

Protein Plug hypothesis :

Alcohol

↓

Protein conc in pancreatic secretion & Glycoprotein2 secretions in acinar cells

↓

formation of protein precipitates & protein plug calcification of ppt.

↓

ductal stone formation duct obstruction Ulceration of epithelium, fibrosis

Pathogenesis

Toxic metabolite hypothesis :

fatty acid ethyl esters and reactive O2 species

↓

Increase fragility in intraacinar organelles such as zymogen granules and lysosomes,

↓

Damage acinar cells

↓

scarring of the pancreatic parenchyma Impair microcirculation

Acetaldehyde causes direct acinar injury.

Pathogenesis

Pancreatic stellate cells (PSCs):

PSCs - quiescent fibroblasts (base of acinar cells.)

PDGF, TNF, IL-1, IL-6 ↓ Alcohol & its metabolites

activated myofibroblasts ↓

↓

Synthesize proteins

(collagen I and III, fibronectin, laminin, MMP) ↓

↓

FIBROSIS

Clinical features

- Abdominal Pain
- Exocrine insufficiency occurs in 80% to 90%
- steatorrhea
- diarrhea
- fat-soluble vitamin deficiency, such as bleeding, osteopenia, and osteoporosis,
- Endocrine insufficiency - diabetes mellitus
- Jaundice or cholangitis
- Rarely upper GI bleed

Management

- Cessation of alcohol and smoking
- Anti oxidants
- Pancreatic Enzyme Therapy
- Stent placement and sphincterotomy
- Resection of tissue
- Drainage & preservation of tissue

THANK YOU