

# Pancreatitis

## Definition

An inflammation of the pancreas which is classified into

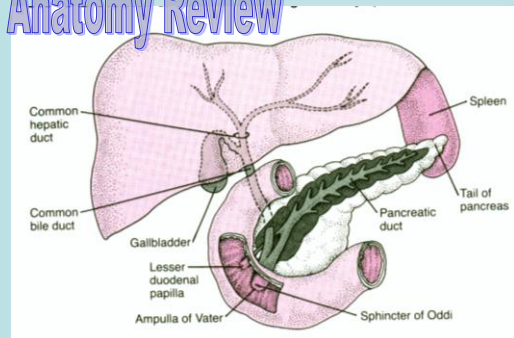
- Acute pancreatitis
- Chronic pancreatitis

## Acute Pancreatitis

This is a term that is reserved for acute inflammation that resolves clinically and histologically.

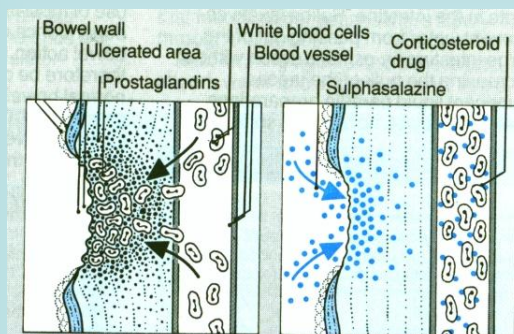
(classically caused by gallstones)

## Anatomy Review



## Causes, Incidence and Risks

- Classically caused by biliary tract disease and alcoholism (80%)
- The remaining 20% are caused by
  - Drugs (sulphasalazine, furosemide, etc)
  - Viral Infection (mumps)
  - Structural abnormalities (common bile duct, pancreatic duct, sphincter of Oddi stenosis)
  - Surgery/Trauma
  - Hereditary
- Presents in patients over 55yrs



- In biliary tract disease acute episodes are experienced as a result of gallstones impaction in the sphincter of Oddi.
- High alcohol intake over many years causes deposition of protein within the pancreatic ductules.
- These protein plugs cause inflammation by blocking the release of activated enzymes which leads to haemorrhage and oedema

- If the inflammation is confined to the pancreas the mortality < 5% (This is referred to as **Oedematous Pancreatitis**)
- However if this enzyme rich fluid permeates the retroperitoneum it will find its way into the systemic circulation. (**Severe Acute Pancreatitis**)
- The enzymes cause a chemical burn increasing the permeability of the capillaries.
- This results in large scale fluid leakage into the retroperitoneal space eventually causing hypovolemic shock
- The circulating enzymes themselves may damage tissue directly (e.g. lungs)

- Mortality is high when the inflammation is not confined to the pancreas (10% to 50%)
- Cardiovascular instability causes most deaths within the 1<sup>st</sup> seven days.
- After the first week death usually occurs as a result of secondary infection, haemorrhage or rupture. (debridement surgery is the only option)

## Symptoms

- Abdominal pain referred to the back
- WF
  - Vigorous movement
  - coughing
  - deep breathing
- Boring in quality and persistent (hrs/days)
- Nausea
- Vomiting

## Signs

- Patient looks ill
- Abdominal tenderness
- Sweating
- Transient high/low BP
- Tachycardia
- Breathing rapid and shallow
- Fever
- Abdominal muscle guarding
- May be a palpable mass
- Ascites

## Tests

- Blood tests may show
  - elevated lipase and amylase
  - increased WBC
- X-Ray/Ultrasound/CT scan
- ERCP (endoscopic retrograde cholangiopancreatography)

## Prognosis

- In biliary disease the prognosis is good and normally resolves with the passage or removal of the gallstone
- In alcohol induced acute pancreatitis the prognosis is good within less than 5% fatality if the inflammation is confined to the pancreas.
- Where the inflammation spreads to the retroperitoneal cavity and circulation the progress is poor.

## Treatment

- **Mild Oedematous Pancreatitis**
  - Removal of impacted gallstone
  - IV fluid to prevent Hypovolemia
  - Fasting
  - Cholecystectomy
  - Endoscopic removal of impacted stone
- **Acute Severe Pancreatitis**
  - Patient needs intensive care
  - IV fluid
  - Transfusion if retroperitoneal haemorrhage has occurred
  - Debridement surgery
  - Fasting
  - Antibiotics
  - Painkillers
  - Low fat diet

## Complications

- Hypovolemia
- Respiratory Failure
- Cardiovascular instability
- M.I.
- Renal failure
- Pancreatic necrosis
- Pseudocysts

