CIRRHOSIS

- Chronic generalized liver disease

- A condition that is defined histopathologically and has a variety of clinical manifestations and complications, some of which can be life threatening.

- Pathologic features: architectural distortion of liver parenchyma with formation of regenerative nodules (micronodular / macronodular) separated by fibrous septae.

- These nodules are non-functioning resulting in impaired liver function.
NORMAL
PATHOGENESIS

- Hepatocellular death
- Regeneration
- Progressive fibrosis

The induction of fibrosis occurs with activation of hepatic stellate cells, resulting in formation of increased amounts of collagen & other components of extracellular matrix.

Classification of cirrhosis
- Macronodular > 3mm due to chronic hepatitis
- Micronodular < 3mm due to alcoholism
- Mixed type
MICRONODULAR CIRRHOSIS
MACRONODULAR CIRRHOSIS

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cirrhosis: loss of architecture of the liver, regeneration nodules which are separated by fibrous tissues septa & contain areas of fatty change
Histopathology (Masson Trichrome stain which stain fibrous tissue)
ETIOLOGY

- Alcoholism
- Chronic Viral Hepatitis - Hepatitis B
  - Hepatitis C
- Autoimmune Hepatitis
- Nonalcoholic steatohepatitis
- Biliary Cirrhosis - Primary biliary cirrhosis
  - Primary sclerosing cholangitis
  - Autoimmune cholangiopathy
ETIOLOGY

- Cardiac Cirrhosis
- Inherited metabolic liver disease:
  - Hemochromatosis
  - Wilson’s Disease
  - Alpha 1 Antitrypsin deficiency
  - Cystic Fibrosis
- Cryptogenic Cirrhosis
- Others: Galactosemia, Tyrosinemia,
  - Drug induced: alpha methylldopa
  - Syphilis
COMPLICATIONS OF CIRRHOSIS

- Portal Hypertension - Gastroesophageal Varices
  Portal hypertensive Gastropathy
  Splenomegaly, Hypersplenism
  Ascites
- Hepatorenal Syndrome - Type 1 & 2
- Hepatic Encephalopathy
- Bleeding tendency
- Portopulmonary Hypertension
- Malnutrition due to hypoproteinaemia
- Acute liver failure
COMPICATIONS OF CIRRHOSIS

- Coagulopathy: Factor deficiency
  - Fibrinolysis
  - Thrombocytopenia
- Bone Disease: Osteopenia/Osteoporosis/Osteomalacia
- Haematological abnormalty: Anaemia
  - Hemolysis
  - Thrombocytopenia
  - Neutropenia