BENIGN LIVER TUMOURS

- Hemangioma.
- Hepatic adenoma.
- Focal nodular Hyperplasia.
- Hamartoma.
MALIGNANT TUMOURS

- Hepatoma (HCC).
- Metastatic tumours.
- Others (cholangiocarcinoma, sarcoma, )
The commonest benign tumour of the liver.

More frequently capillary and less cavernous.

1–2 cm to hemi liver.

Mostly asymptomatic, but may present with hepatomegally, high output cardiac failure, coagulopathy and rarely rupture and bleeding.

Diagnosis by US, contrast CT, MR scan and tagged red cell scan.
CT SCAN OF SOLITARY AND MULTIPLE HEPATIC HEMANGIOMAS
TREATMENT

- Asymptomatic cases should only be observed.
- Symptomatic cases or large ones are remove by inoculation or resection.
- Bleeding cases may be controlled by intervention embolisation until definitive surgery can be done.
The incidence of adenomas markedly increased with the use of oral contraceptives.

They are soft fleshy tumours composed of sheets of hepatocytes containing glycogen.

May be asymptomatic (not common).

Most cases present with palpable mass and $\frac{1}{3}$ of cases present with bleeding.

Rupture may occur during pregnancy.
Diagnosis:

LFT and a-fetoproteins are normal.

US and CT identify the lesion but not differentiate it from malignant lesions.

Some use biopsy for differentiation.

Tc sulphur colloid differentiate it from focal nodular hyperplasia.
Treatment:

- Some small lesions regress with cessation of oral contraceptives.
- Persistent lesions should be excised.
- Large and ruptured lesions need anatomic liver resection.
FOCAL NODULAR HYPERPLASIA

- Represents a reaction to injury rather than a neoplasm.
- Usually solitary and small and located at the liver periphery near the edge.
- They resemble regenerative nodules with central scar.
- Usually asymptomatic and haemorrhage is rare.
The incidence of HCC has increased with the increased incidence of viral hepatitis.

It is more common in Africa and Asia.

Male to female ratio is 3:1.

*Risk factors include:* chronic hepatitis B&C, alcohol, aflatoxin, hemochromatosis, and Wilsons disease.

Cirrhotic patients have a 5% incidence of HCC, this increases to 10% when hemochromatosis is the cause of cirrhosis. 70 to 80% of hepatomas arise in cirrhotic livers.
• Pathology:
  - HCC may be nodular (clusters of nodules), massive (single large mass) or diffuse (widespread fine nodules).
  - The right hemi liver is more involved except for the fibrolamellar type which is 70% in the left lobe.
  - Microscopically it is characterised by formation of giant cells and invasion of venous branches.
  - Fibrolamellar type shows abundant fibrous stroma arranged in parallel bands.
Clinically:

- Weight loss (80%).
- Abdominal pain (50%), usually dull and persistent.
- Rupture and bleeding (10%) may cause severe pain and can be lethal.
- Features of cirrhosis are common.
- It may reveal palpable non-tender liver.
- In a cirrhotic patient rapid acceleration of symptoms may suggest HCC.
HEPATOMA (cont)

- **Diagnostic studies:**
  - In cirrhotic patients lap results will show abnormal LFT while in non-cirrhotics we may find increased alk. ph. And transaminases with normal bilirubin.
  - AFP is usually elevated in both HCC and cirrhosis but levels above 200 ng/mL suggest HCC.
  - US accurate in detecting HCC specially when coupled with elevated AFT.
  - MR is accurate to differentiate HCC from regenerative nodules of cirrhosis.
  - Spiral CT with enhancement and contrast (lipidol).
  - Needle biopsy (laparoscopic or image guided) are used for unrespectable tumours to guide chemotherapy.
Single mass in cirrhotic liver
CT of HCC in cirrhotic liver
TREATMENT:

- Surgical resection.
- Liver transplantation.
- Radio and chemotherapy.
- Ablative therapies:
  - Percutaneous ethanol injection.
  - Trans-arterial chemo embolisation.
  - Radiofrequency ablation.
• 20 times commoner than primary tumours.
• The hepatic metastases are more aggressive than the primary lesion.
• Many cases are asymptomatic.
• With disease advancement, symptoms include fatigue, anorexia, weight loss, dull pain and palpable mass.
• With carcinoid primary the liver metastases produce carcinoid flushing syndrome.
LFT may be abnormal but they are not sensitive or specific.

AFT is usually normal.

CEA >5 ng/mL is the most sensitive blood test.

CT or MR scan with arterial contrast is a sensitive preoperative test.

Positron emission tomogram (PET) is the most sensitive test.

Laparoscopy is the best method for detection of metastatic disease and permits safe targeted biopsy confirmation.
Multiple hepatic metastases from colonic cancer
Multiple hepatic metastases from colonic cancer
Treatment of hepatic metastases:

Only a selected group of patients with discretely nodular disease are amenable to treatment.

The available options are surgical resection, chemotherapy, chemoembolisation, hyperthermia, cryotherapy, and alcohol injection.

Surgical resection is applicable for less than 5% of patients. Best results are obtained with colorectal metastatic disease. It is indicated when deposits are fewer than 4, there is no extra-hepatic metastases and no co morbid disease.
Arises from the intra-hepatic biliary radicals.

Presents mainly with jaundice.

Slowly growing and metastasises late.

Resection is the best treatment whether curative or palliative.

Inoperable cases are best managed with percutaneous trans-hepatic or endoscopic stenting.

It is usually chemo and radio resistant.
SARCOMA

- Arises from connective tissue components.
- Rapidly growing and usually reaches big size.
- Usually complicated by hypoglycemia.
- Treatment is usually palliative with chemotherapy or radiotherapy.