OBSTRUCTIVE JAUNDICE

Dr. S. FLORET
SURGICAL JAUNDICE (Obstructive jaundice)

CAUSES:

1. Biliary atresia.
2. Choledochal cyst.
3. CBD stones.
4. Ascending cholangitis.
5. Biliary strictures.
7. Carcinoma of head and periampullary region of the pancreas.

8. Cholangio carcinoma.

9. *Klatskin tumour* (Carcinoma at the confluence of hepatic ducts above the level of the cystic duct and so will cause hydrohepatosis without GB enlargement).

10. Extrinsic compression of CBD by lymph nodes or tumours.

11. Parasitic infestations.
Fig. 10.20: Different causes of obstructive jaundice.
CLINICAL FEATURES:

* Severe jaundice.

* Pruritus, more on the back and forearms.

* Fever, may or may not be present.

* Loss of weight.

* Loss of appetite.
CLASSIFICATION OF CAUSES OF OBSTRUCTIVE JAUNDICE:

1. **Congenital**: Biliary atresia, choledochal cyst.
2. **Inflammatory**: Ascending cholangitis, sclerosing cholangitis.
3. **Obstructive**: CBD stones, biliary stricture, parasitic infestation.
4. **Neoplastic**: Carcinoma of head or periampullary region of pancreas, cholangiocarcinomas, Klatskin tumour.
5. **Extrinsic compression** of CBD by lymph nodes or tumours.
INVESTIGATIONS FOR OBSTRUCTIVE JAUNDICE:

1. Serum bilirubin. Normal value is less than 1.0 mg%. Both direct and indirect bilirubin are assessed. Direct is increased in obstructive jaundice, i.e. conjugated hyperbilirubinaemia. van den Bergh's test is done.

2. Serum albumin, globulin and A:G ratio.
   Normal S.albumin is more than 3.5 gm%.

3. Prothrombin time. Normal value is 12-16 seconds. It is significant if it is more than 4 from the control or more than one and half times the control. It is corrected by injection of vitamin K, 10 mg 1M 00 for 5 days or by FFP-5 10 units.
4. Serum alkaline phosphatase, SGPT, SGOT, 5'nucleotidase.
5. U/S abdomen.
6. ERCP to visualize the site of obstruction, brush biopsy, bile sample for analysis.
7. MRCP--'Non-invasive diagnostic tool.
8. CT scan in case of tumours to assess operability.
**FOUCHET'S TEST:**

* 10 ml of urine + 5 ml of BaCb + pinch of MgSO₄ causes formation of BaSO₄ which is filtered over a filter paper and few drops of Fouchet's reagent is added. Green or blue colour signifies presence of bilepigments in the urine.

**HAY'S TEST FOR BILE SALT:**

* Sprinkle sulphur to 2 ml of urine. In the presence of bile salts sulphur sinks to the bottom.
**EHRLICH’S TEST:**

* 5 ml of freshly voided urine + 1 ml of Ehrlich reagent (p-dimethyl amino benzaldehyde) and wait for 5 minutes. Formation of red colour signifies presence of urobilinogen in urine. Normally it is present in traces, in obstructive jaundice it is absent and in haemolytic jaundice it is in excess.
PREOPERATIVE PREPARATION OF PATIENT WITH OBSTRUCTIVE JAUNDICE:

* Proper diagnosis and assessment.

* Injection vitamin K 1M 10 mg for 5 days.

* Fresh Frozen plasma-often requires 6 bottles or more.

* Blood transfusion in case of anaemia.

* Oral neomycin, lactulose.
Cont –

* Mannitol 100-200 ml BD IV to prevent hepato renal syndrome.
* Hydration
* Repeated monitoring by doing prothrombin time, electrolytes.
* Antibiotics like third generation cephalosporins.
* Calcium supplements as calcium chloride IV.
TREATMENT OF OBSTRUCTIVE JAUNDICE:

* **CBD stones** - ERCP stone removal, choledocholitho-tomy, transduodenal sphincterooplasty, choledochojejunostomy or choledocho-choledochoduodenostomy.

* **Carcinoma periampullary or head of pancreas** - Whipple's operation or triple bypass or ERCP stenting.

Cont –

* **Klatskin tumour** - Radical resection or palliative stenting.

* **Biliary atresia** - Kasai's operation or liver transplantation.

* **Choledochal cyst** - Excision, hepaticojejunostomy, mucosal resection.
Fig. 12.21: Diagram showing stone in CBD causing the block and subsequent dilatation of the proximal CBD and biliary tree with cholangitis.
Fig. 12.23: Diagram showing placement of T-tube in CBD after choledochololithotomy. Note the separate drain placed in the cholecystectomy bed to drain fluid, blood, bile.
Fig. 12.25: Technique of choledochoduodenostomy for CBD stones. Note the site of possible occurrence of sump syndrome.
Fig. 14.24: Whipples operation.

1. Choledochojejunostomy
2. Gastrojejunostomy
3. Pancreaticojejunostomy
Fig. 14.26: Choledochojejunostomy (CDJ) with gastrojejuno-
stomy (GJ) and jejunojejunostomy (JJ). It is a Roux-en-Y 
anastomosis. CDJ should be 70 cm from the JJ.
- Pylorus preserving pancreatectomy (Modified Whipple’s resection).

Fig. 14.27: Cholecystojejunostomy.
POSTOPERATIVE MANAGEMENT:

* Monitoring with prothrombin time, bilirubin, albumin, creatinine, electrolyte estimation.
* FFP or blood transfusion.
* Antibiotics.
* Observation for septicaemia, haemorrhage, pneumonia, pleural effusion, bile leak.
* Care of T-tube and drains.
* T-tube cholangiogram in 10-14 days.
* TPN, CVP line, nasogastric tube, urinary catheter.
Thank you