

Jaundice – Mr Bohmer – 9.00am – 09/09/03

Jaundice (Davidson's 18th Ed pp 689)

Jaundice is the yellow appearance of the skin, sclerae and mucous membranes when there is increased bilirubin concentration in the body fluids. The internal body tissues and fluids are coloured yellow, except the brain because bilirubin cannot cross the BBB.

Bilirubin Metabolism (Davidson's 18th Ed pp 689)

Unconjugated bilirubin is produced by catabolism of haem. Sources of it include: haemoglobin breakdown, catabolism of myoglobin + cytochrome enzymes, ineffective erythropoiesis.

Unconjugated bilirubin (water insoluble) → enters Liver → conjugated bilirubin (water soluble) → exported to bile by membranes pumps in hepatocytes. Conjugated bilirubin is metabolised by colonic bacteria → stercobilinogen → stercobilin → excreted in stools. Small amount of stercobilinogen is absorbed by bowel → passes to liver → excreted in urine as urobilinogen / urobilin.

Types of Jaundice (Notes)

Three types of jaundice based on anatomical landmarks: Pre, Intra, Post – hepatic jaundice. There are two things that can cause all these types: **drugs, sepsis.**

History of Jaundice – The key elements (Notes)

- HPC: when did you notice?, urine or faecal changes?, fevers?, chills?, pain?, vomit?
- Drug History: comprehensive
- PMHx: similar episode?, viral infections?, blood transfusions?, appetite/weight loss?
- Social: alcohol?

Pre-Hepatic Jaundice (Davidson's 18th Ed pp 690)

Haemolytic Jaundice: unconjugated bilirubin comes from catabolism of haem. Increased destruction of red blood cells will cause this. This is caused by: autoimmune, drugs, infection, haematoma. Jaundice is usually mild.

Drugs

Sepsis

Intra-hepatic Jaundice (Davidson's 18th Ed pp 691)

Anything that affects the liver's capability to conjugate the bilirubin will cause this type of jaundice. Causes include:

Hepatitis: *Infective*: bacteria, viruses (i.e.: Hep A-C, CMV, EBV), parasites (i.e.: malaria), fungi (i.e.: *Candida*), sepsis. *Non-infective*: drugs, alcohol, congestive cardiac failure.

There are some enzyme deficiency syndromes that can cause problems with the uptake of unconjugated bilirubin or transport of conjugated bilirubin into the bile canaliculi. **Gilbert's syndrome** is an example of this. For others refer to Table 10.5, Davidson's 18th Ed pp 692.

Post-hepatic Jaundice (Davidson's 18th Ed pp 691)

Anything that causes stasis of bile in the biliary tree will cause this type of Jaundice. Causes include: Hepatoma, Strictures of the bile duct (cholangiocarcinoma), pancreatic carcinoma (ampullary, duodenal), gall stones, primary sclerosing cholangitis.

Clinical features of cholestatic jaundice: jaundice, dark urine, pale stools, pruritus. If cholangitis develops then you get: rigors, fevers, pain, hepatic abscess formation.

Investigation of choice is an ultrasound. Refer to Fig 10.7 of Davidson's 18th Ed pp 690. Bile duct may be dilated due to blockage/stricture formation.