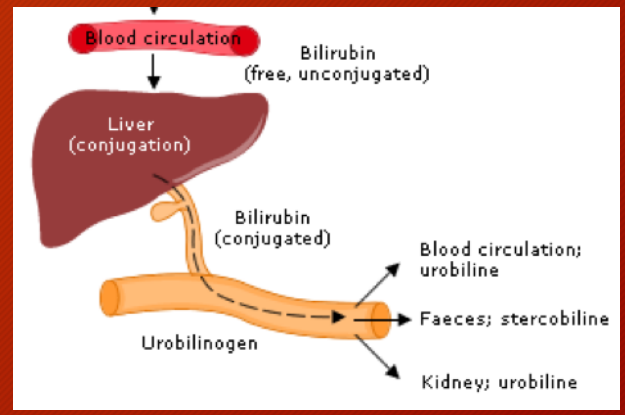
Paediatric Quick Hits Neonatal Jaundice

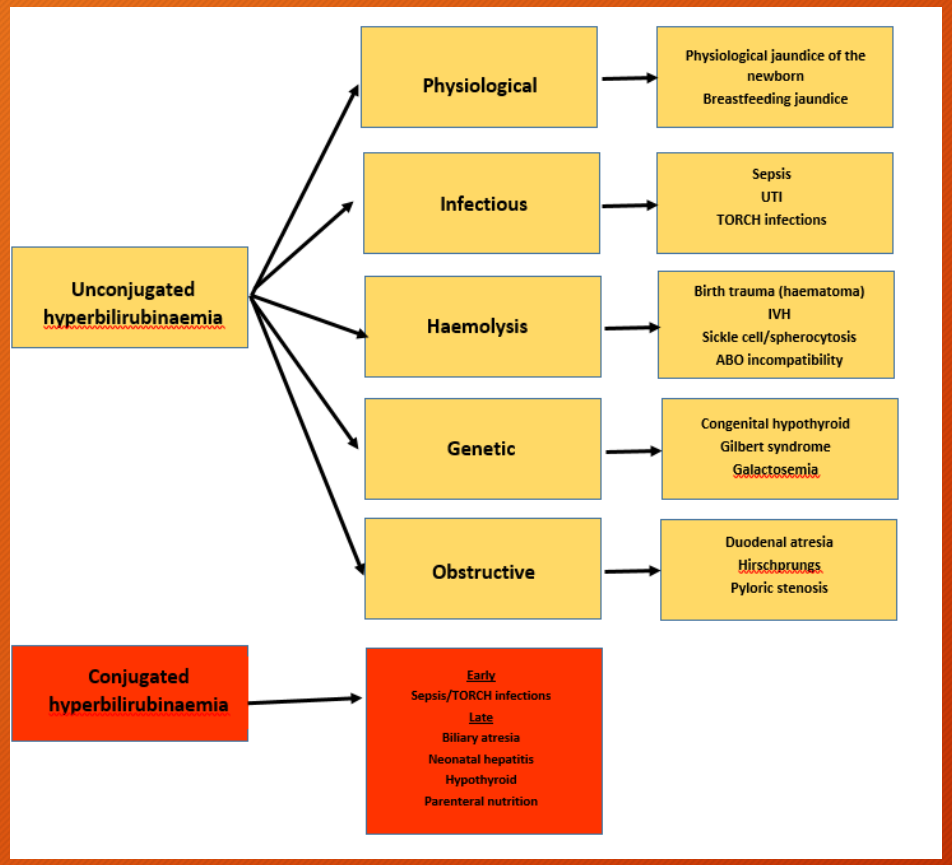
By Val Astle

Background

- 70% of term infants will become clinically jaundiced in their first week of life
  - Most peak about day 4 and most resolve by day 14
- Occurs due to imbalance between production and excretion of bilirubin
- Kernicterus is a rare complication of unconjugated hyperbilirubinaemia
  - But can lead to major long-term neurological sequelae
  - Rates of this are rising slightly- partly due to patients being discharged earlier, before that natural peak in bilirubin



Causes



- If sick think SEPSIS
- Onset in <24 hours is bad
  - Think sepsis or haemolysis
- Conjugated is bad!
- Most common cause is physiological or breastfeeding
- Breastfeeding is a diagnosis of exclusion

History/exam

Ask about:
Birth history
Feeding (input and output)
Weight gain
Family hx

Jaundice in first 24 hours
Prolonged jaundice (>2 weeks)
Hepatomegaly
Infant unwell (septic)
Dark urine/pale stools

Examine for:
Hydration
Level of alertness
Any signs of trauma
Hepatosplenomegaly
Colour

Investigations

Transcutaneous bilirubinometers can be used if clinically child well and felt to be physiological

- If level within 50 of treatment threshold then would need bloods

- All others
  - Bilirubin level (conj and unconj)
  - FBC and retic count
  - EUC (if concerned r.e. dehydration
  - Direct combs test and blood group (if not already done)
  - BGL

- If prolonged jaundice also needs
  - LFTs
  - TFTs
  - G6PD
  - Urine

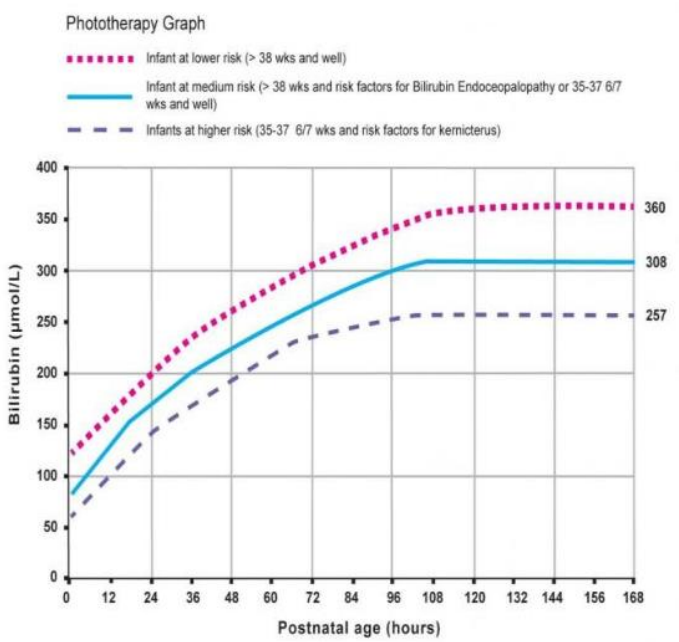
- If Conjugated also needs
  - LFTs
  - TFTs
  - G6PD
  - Coag

- If Septic also needs
  - CRP
  - Blood cultures
  - Urine
  - LP
  - Consider TORCH and metabolic screen

Treatment

Plot total bilirubin level to see if phototherapy required

Graph 1: Guidelines for phototherapy in hospitalised Infants of greater than 35 weeks gestation[11]



Treat the cause

Cause	Management
Sepsis	Immediate treatment as per SEPSIS – assessment and management with IV antibiotics
Haemolysis	Discuss with local paediatric services
Dehydration/ feeding concerns	Hydration, feeding plan and support Consider maternal and child health nurse & lactation consultant involvement
Physiological jaundice	Exaggerated physiological response Should resolve by 2–3 weeks
Breast Milk Jaundice	Diagnosis of exclusion Do **NOT** stop breastfeeding May last up to 6 weeks, no further bilirubin levels necessary, unless jaundice is deemed to be worsening
Hypothyroidism	Discuss with local paediatric services
Extra-hepatic obstruction *Uncommon but early diagnosis improves outcome*	May present with dark urine, pale stools & conjugated hyperbilirubinaemia NOT excluded by negative abdominal US If suspected discuss with tertiary paediatric services within 24 hours

Those that can go home…

- Most babies will have physiological or breastfeeding
  - These babies can be discharged with
    - GP FU to re-check bilirubin level in 24-48 hours if level close to threshold
    - Child health nurse or lactation consultant follow up if issue is around feeding
- If breastfeeding jaundice- encourage the mother to keep feeding!
  - These mums need extra support and encouragement
  - But ultimately a fed baby is best

My slightly less yellow baby after phototherapy!