

# JAUNDICE

## RECOGNITION AND ASSESSMENT

### Symptoms and signs

- Yellow colouration of the skin in a pale-skinned infant observed in natural light
- Yellow conjunctivae in dark-skinned infants

### Assess

- Pallor
- Poor feeding, drowsiness (neurotoxicity)
- Hepatosplenomegaly (blood-group incompatibility)
- Splenomegaly (spherocytosis)

### Causes

- Physiological
- Prematurity
- Increased haemoglobin load (e.g. bruising, blood group incompatibility)
- G6PD deficiency and other red cell enzyme deficiencies
- Congenital spherocytosis
- Cephalhaematoma
- Rarely infection (e.g. UTI, congenital infection)
- Metabolic disorder

### **Persistent jaundice after 14 days of age**

- Breast milk jaundice
- Hypothyroidism
- Liver disease (e.g. extra hepatic biliary atresia and neonatal hepatitis)
- Alpha-1-antitrypsin deficiency
- Galactosaemia
- TPN

### Investigations

#### **All**

- Total bilirubin

### **Jaundice in first 24 hours of life or requiring treatment**

- Full blood count and film
- Baby's blood group and direct Coomb's test
- Mother's blood group and antibody status (should be available from maternal case notes)
- Full infection screen (in an ill babies)
- G6PD concentration (if indicated by ethnic origin – Mediterranean, Middle Eastern, South East Asian)

### **Persistent jaundice >14 days old**

- Total and conjugated bilirubin
- Urine M,C&S
- Document stool colour

### **Unconjugated persistent jaundice:**

- G6PD screen in African, Asian or Mediterranean patients
- Thyroid function tests – ask for 'FT<sub>4</sub> priority and then TSH'
- Blood galactose-1-phosphate
- Congenital infection screen:
  - urine for CMV PCR, toxoplasma ISAGA-IgM and throat swab for HSV culture/PCR
- Metabolic investigations (e.g. urine for reducing substances)

**If conjugated bilirubin elevated (>20% of total or >20 µmol/L), discuss with consultant**

## **TREATMENT <7 DAYS**

- Adequate fluid and energy intake
- Phototherapy

### **Jaundice presenting in first 24 hours of life**

- Visible jaundice can be treated with phototherapy after sample taken for bilirubin measurement

### **After first 24 hours**

- Commence phototherapy according to the equation:
- serum bilirubin ( $\mu\text{mol/L}$ ) = (gestational age in completed weeks x 10) – 100

### **Phototherapy**

- If bilirubin near exchange levels or still rising:
- increase power number of lights
- increase area exposed (e.g. biliblanket and overhead)

### **Exchange transfusion**

- See **Exchange transfusion** guideline)

## **MONITORING TREATMENT**

- Check bilirubin level 24-hrly or more frequently depending on rate of rise
- If haemolysis present, check bilirubin 4-6 hrly until rate of rise flattens
- If bilirubin concentration approaching threshold for exchange transfusion, or rising rapidly ( $>10 \mu\text{mol/hr}$ ), check 4 hrly

## **SUBSEQUENT MANAGEMENT**

- When bilirubin concentration has fallen below the threshold for phototherapy (see above), discontinue phototherapy
- If jaundice persists after 14 days of age, review and treat cause

## **DISCHARGE POLICY**

- GP follow-up with routine examination at 6-8 weeks
- If exchange transfusion necessary or considered, request development follow up and hearing test
- In babies with positive Coomb's test who require phototherapy, check haemoglobin at 2 and 4 weeks of age because of risk of continuing haemolysis