PAEDIATRIC ACUTE CARE GUIDELINE	
Jaundice – Neonatal	
Scope (Staff):	All Emergency Department Clinicians
Scope (Area):	Emergency Department

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Jaundice – Neonatal

Background

- A sick neonate with jaundice is septic
- Conjugated hyperbilirubinaemia need urgent discussion with gastroenterologist
- Breast milk jaundice is a diagnosis of exclusion

General

- Up to 60% of term and 80% preterm neonates will become clinically jaundiced in the first week of life
- Usually, the total serum bilirubin (TSB) rises during day 3-5 of life, and begins to decline from then, and usually resolves within 10-14 days
- Most well newborns with jaundice have physiological jaundice with unconjugated bilirubin and usually do not require specific treatment
- Kernicterus was rarely seen in decades following the introduction of phototherapy and exchange transfusion, however, recent reports suggest it is reemerging. This has been partly attributed to earlier hospital discharge (within 48 hours of birth), before the natural peak of bilirubin in the neonate, as well as a result of relaxation of the treatment criteria.

Risk factors

- Jaundice in first 48 hours
- ABO/Rhesus incompatibility
- Significant weight loss with breast feeding

- Delayed meconium passage
- Ethnicity – East Asian descent
- Visible jaundice before hospital discharge
- Exclusive breast feeding
- Male gender
- Excessive birth trauma
- Family history of haemolytic disease

Assessment

Pathological Jaundice

- Jaundice occurs in the first 48 hours of life
- Associated anaemia and hepatomegaly
- Rapid rising total serum bilirubin (> 85 micromol/L per day)
- ↑ conjugated bilirubin level > 20% total serum bilirubin – cholestatis (e.g. biliary atresia)
- Prolonged jaundice > 14 days

History

Clinical history should include:
■ Birth history, gestational age, birth weight ■ Timing of jaundice; when jaundice started, is it worse now? ■ Feeding habit, volume of intake, exclusive breastfeeding, vomiting ■ Urine output and colour (dark urine) ■ Stooling – delayed passage of meconium or light coloured stool ■ Change of behaviour – lethargy, cries becoming shrill, arching of the body ■ History of temperature instability

Examination

Physical Examination
■ Assessment of jaundice is best done in natural light ■ Jaundice usually follows a cephalocaudal progression ■ Pallor, petechiae, cephalohaematoma, excessive bruising, hepatoslenomegaly ■ Hydration and weight status ■ Plethora (polycythemia)

Investigations

Initial
■ A transcutaneous bilirubin measurement (if available) should be taken as an initial screen in neonates <14 days old – if high, bloods should be processed urgently with early discussion with ED senior doctor or neonatologist ■ Bilirubin conjugated and unconjugated ■ LFT ■ FBC (add reticulocyte count if anaemic) ■ Urine culture ■ + / – TFT (check if infant has had normal neonatal screening) ■ G-6PD ■ Urine for reducing substances ■ Direct Coombs if not already done

Management

Guidelines for Phototherapy in Hospitalised Infants of 35 or more weeks Gestation

Initial management

Emergency Management and Disposition of Neonates with Jaundice

- Sick babies need a septic screen, antibiotics and admission
- Full term, well appearing and afebrile neonates without significant risk factors and bilirubin level less than the level indicated in the graph can be discharged with GP follow-up in 1-2 days for repeat SBR
- Admit for phototherapy if bilirubin level is over the line as per the graph

Breast Milk Jaundice

- Breast milk jaundice is common. Breast feeding should continue to be encouraged. It

may last 3-12 weeks
- Outline the risks and benefits of continuation of breastfeeding with close monitoring, supplementation with formula or brief substitution of breastfeeding with formula + continue to express breast milk to maintain breast milk secretion

Further management

Management – Prolonged Unconjugated Jaundice (>14 days for term and > 21 days for preterm)
Check for adequate fluid intake – dehydration, fewer wet nappies, weight loss > 10% of birth weight, then: • Bilirubin – conjugated and unconjugated • FBC, LFT, TFT, urine culture, Direct Coombs test if not yet done • Red blood cell enzyme assays for G6PD • If unwell – consider septic screen, TORCH screen and metabolic screen

Management – Conjugated Hyperbilirubinaemia
• Cholestatsis – e.g. biliary atresia, choledochal cyst, alpha anti-trypsin deficiency • Consider: LFT, FBC, TFT, urine culture, CRP, abdo US • Discuss with gastroenterologist early

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