

OSCE

Candidate information

There have been two occasions recently where a specific junior doctor working in Paediatrics has tried to discharge neonates with jaundice.

You have arranged a meeting with the junior doctor to educate them on the types and causes of jaundice in neonates. You will be given a set of blood results from one of the recent cases to review with the junior, and may use this as the basis of your education session.

Domain	%
Medical expertise	40
Prioritisation and decision making	
Communication	30
Teamwork and collaboration	
Leadership and management	
Health advocacy	
Scholarship and teaching	30
Professionalism	

Neonatal jaundice

Actor (junior doctor) information

You have recently been working in paediatrics, and have nearly discharged two neonates with jaundice. Your consultant has arranged a meeting with you to teach you about the types and causes of neonatal jaundice.

Prop: you have a set of blood results from Mason, a 1 week old term baby boy you saw last week. Mason is breastfed and otherwise well.

Prompts:

- How common is neonatal jaundice?
- What are the causes of unconjugated and conjugated jaundice in neonates?
- What are the complications of jaundice?
- What factors cause increased risk of developing kernicterus?

Marking:

- **How common is neonatal jaundice?**
- Term = 60%
- Pre-term = 80%

b. List causes of neonatal unconjugated hyperbilirubinaemia

- Physiological
- Breast milk jaundice
- Sepsis
- Haemolysis due to blood group incompatibility
- Non-haemolytic red cell destruction e.g. polycythaemia, bruising, cephalhaematoma)
- GIT Obstruction
- Prematurity
- Hypothyroidism

c. List 2 causes of neonatal conjugated hyperbilirubinaemia

- Biliary Atresia
- Choledochal cyst
- Neonatal hepatitis
 - Idiopathic
 - TORCH infection - toxoplasmosis, CMV, rubella, herpes, syphilis
- Metabolic disorder inc. galactosaemia, fructose intolerance
- Post TPN

d. List two factors associated with an increased risk of developing kernicterus

- Severe hyperbilirubinaemia (>340 micromol/litre in term baby)
- Rapidly rising bilirubin level (> 8.5 micromol/litre/hour)
- Clinical features of acute bilirubin encephalopathy

	Mark
Gives incidence of neonatal jaundice (ballpark figures OK)	2
States at least 4 causes jaundice (MUST include sepsis)	2
Gives other causes of jaundice	1
Mentions conjugated vs unconjugated jaundice	1
States risk factors for developing kernicterus	1
Brief mention of investigations/management	1
Interprets blood accurately – conjug jaundice, must investigate further*	1
General teaching approach – non-judgemental, etc	1

***Answers (continued)**

From QLD health guidelines:

Baby >24 hours old, jaundiced:

Medical emergency · Check maternal ABO and RhD type and red cell antibody screening · Blood tests: o Urgent TSB including conjugated and unconjugated o FBC o ABO group; type RhD (or other if other maternal antibodies) o DAT · Consider: o Urea and electrolytes o LFT o Albumin o C-reactive protein o Blood culture o Urine MCS o Congenital infection screen o Screen for inborn errors of metabolism (unwell baby/severe jaundice)

Management · Plot TSB on nomogram (gestation, weight and age appropriate) for treatment regimen · Treat/manage underlying disease · Commence phototherapy as indicated · Nutrition—support breast feeding and adequate intake of formula feeding babies · Assess output—volume/amount and colour · Exchange transfusion—refer to tertiary centre · Discuss management plan with parents ·

If conjugated bilirubin elevated: o Urgent LFT/BGL/INR o Refer to paediatric surgeon/ gastroenterologist

Blood results (preliminary) for Mason JACKSON

MRN 21586464

Age: 7 days

Bilirubin (total)	34 umol/L (<20 umol/L)
Bilirubin (conj)	14 umol/L (<7 umol/L)
Hb	100 g/L (90-140 g/L)