



MSSBU OSCE PRACTICE

CASE 3_03_04

Station Vignette

You are a third-year student at the GCUH Special Care Nursery.

The GP has asked you to take a brief history from Chris/Christina Tucker, a 28-year-old regarding their child. Marty/Martina Tucker, a 3-day-old has presented with jaundice.

TASK

You have a total of **6 minutes** to take a history.

This includes:

- History of presenting complaint
- Constitutional history
- Past medical history
- Medications history
- Social history
- Family history
- Focussed systems review

At the end of the allocated time, you will have **2 minutes** to answer the examiner's questions.

You do **NOT** need to complete a physical examination.

PATIENT INSTRUCTIONS

History of presenting complaint

Introduction: Besides the yellowing of skin and eyes, baby seems to be well.

Onset: Started since yesterday

Associated symptoms: nil

Time course/duration: The limping has been constant since it began 4 days ago

Exacerbating/relieving factors: Nil

Severity: 4/10 in terms of severity

Beliefs: Not sure what has happened. Worried they have done something wrong in terms of preparing for the pregnancy.

Impact on patient: Anxiety about what the underlying disorder is.

Concerns: Is there a serious underlying cause?

Systems review/associated symptoms

*The symptoms **BOLDED** are indicative of positive answers, other answers are suggestions of what is required in terms of questioning to ensure a comprehensive history.*

Haemolysis:

Mother has B+ blood group. No relevant family history of haemolytic conditions including G6PD, thalassemia, hereditary spherocytosis or hereditary elliptocytosis, hepatitis.

Sepsis:

Nil infectious symptoms such as fever, drowsiness, unrousable, irritability, respiratory distress, **Group B Strep positive mum**

Dehydration

Drowsy, malaise, irritability, unrousable, fever, erythema, swelling around hip, recent infection.

Hypothyroidism

Constipation, floppy muscle one, periorbital oedema, macroglossia, family history of hypothyroidism

Cephalohematoma

Bulge which does not cross suture lines, prolonged second stage of labour, instrumental delivery such as using forceps

Cystic fibrosis

Delayed passage of meconium due to meconium ileus formation, heel prick and pilocarpine stress test

Warning red flags for kernicterus

- Nil lethargy
- Nil seizures
- Nil opisthotonos (spasm of muscles)

Paediatric history

BINDS

Birth history: born pre-term, c-section, 34 weeks with Prolonged Rupture of Membranes

If prompted: **Group B Strep positive after low vaginal swab**

Immunisations: Up to date

Nutrition: nil feeding issues, normal appetite, balanced diet

Developmental milestones: normal primitive reflexes

Social history: first born, lives with father and mother

Past medical history (2 marks)

Nil medical conditions

No previous surgeries

Medications (2 marks if general but 1 if asks individual categories)

Prescription: none

Recreational: none

Over the counter: none

Vitamins/supplements: none

Allergies (1 mark)

No known allergies

Family history (1 mark)

Mother: Type 2 diabetes managed with metformin and lifestyle changes

Father: hypertension – well controlled with losartan

Siblings: none

EXAMINER QUESTIONS

1. What is **one (1)** difference between physiological and pathological jaundice?
2. List **two (2)** causes of physiological jaundice.
3. List **two (2)** of pathological jaundice.

Extra question

4. A child presents with jaundice, dark stools, pale urine after 2 weeks since birth. What is the most likely **diagnosis** and **management**?

MARKING CRITERIA – Case 3 03 04

| Item | Criteria | Mark |
|---------------------------------|---|------------------------------|
| Introduction | <input type="checkbox"/> Hand hygiene <input type="checkbox"/> Appropriate introduction <input type="checkbox"/> Confirms patient name and age <input type="checkbox"/> Explains personal role and gains consent | /2 |
| Presenting complaint | <input type="checkbox"/> Leads with open question | /1 |
| History of presenting complaint | <input type="checkbox"/> Site <input type="checkbox"/> Onset <input type="checkbox"/> Character <input type="checkbox"/> Associated symptoms <input type="checkbox"/> Time course/duration <input type="checkbox"/> Exacerbating/relieving factors <input type="checkbox"/> Beliefs <input type="checkbox"/> Impact on patient/concerns | /4 (0.5 for each) |
| Systems review | <input type="checkbox"/> At least 2 symptoms per differential = 1 mark, up to 4 differentials (including developmental dyscrasia of the hip, transient synovitis, osteomyelitis etc.). See patient information for more differentials. | /4 |
| Paediatric history | <input type="checkbox"/> Birth – type and how many weeks, any complications, special care nursery <input type="checkbox"/> Immunisations <input type="checkbox"/> Nutrition – e.g. breastfeeding or formula, latching on, solids | /4 |
| Constitutional history | <input type="checkbox"/> Weight changes <input type="checkbox"/> Appetite <input type="checkbox"/> Diet <input type="checkbox"/> Exercise <input type="checkbox"/> Energy levels <input type="checkbox"/> Sleep <input type="checkbox"/> Night sweats <input type="checkbox"/> Chills <input type="checkbox"/> Fever <input type="checkbox"/> Rashes | /5 (0.5 points for each one) |
| Past medical history | <input type="checkbox"/> Past medical/surgical history <input type="checkbox"/> Asks over the counter, prescription, and herbal remedies <input type="checkbox"/> Allergies <input type="checkbox"/> Immunisations | /4 |
| Family history | <input type="checkbox"/> Asks relevant family history | /1 |
| Social history | <input type="checkbox"/> Occupation <input type="checkbox"/> Living situation <input type="checkbox"/> Asks all of smoking, alcohol and recreational drug use | /3 |

| | | |
|----------------------|--|-----|
| Questions | <input type="checkbox"/> Q1 – see table 1 below <input type="checkbox"/> Physiological jaundice – any 2 of: Prematurity, Breastfeeding jaundice (first week and due to insufficient milk intake), Breast milk jaundice (after first week and due to substances in breast milk interfering with breakdown of bilirubin) <input type="checkbox"/> Pathological jaundice – see table 2 below <input type="checkbox"/> Extra Q – Biliary atresia (1 mark), Kasai procedure (1 mark) and potential liver transplant | /7 |
| Communication skills | <input type="checkbox"/> Appropriate questioning style <input type="checkbox"/> Actively listens to patient <input type="checkbox"/> Systematic approach to history taking <input type="checkbox"/> Appropriate conclusion and summary | /4 |
| Global score | Overall impression of candidate based on warmth, clarity and competence: 1 = fail 2 = borderline 3 = pass/expected 4 = good 5 = excellent | /5 |
| | Total | /40 |

Table 1 – Physiologic vs. Pathologic Jaundice
 Ref: <https://nicugradpodcast.com/ep-11/>







|  PHYSIOLOGIC VERSUS PATHOLOGIC JAUNDICE | |
|--|---|
|  PHYSIOLOGIC |  PATHOLOGIC |
| ONSET <ul style="list-style-type: none"> Term infants: 50-60% within first week of life | ONSET <ul style="list-style-type: none"> Prior to first 24 hours of life |
| RATE/PEAK <ul style="list-style-type: none"> Peak time: 3-5 d (5-7 d in Preterm) Mean peak: 6 mg/dL May be higher/later in Asian Infants | RATE/PEAK <ul style="list-style-type: none"> Rate: > 0.5 mg/dL/hr OR > 5 mg/dL in 24 hours Mean peak: > 12 mg/dL (> 14 mg/dL in Preterm) |
| DURATION <ul style="list-style-type: none"> Between 8-14 days of life | DURATION <ul style="list-style-type: none"> > 8 days (> 14 days in Preterm) |
| SPECIFIC DETAILS <ul style="list-style-type: none"> Preterm infants have a much higher incidence <ul style="list-style-type: none"> Particularly due to immature glucuronyl transferase activity Often asymptomatic and requires no treatment | SPECIFIC DETAILS <ul style="list-style-type: none"> Signs/symptoms of underlying illness 3 Main Categories: <ul style="list-style-type: none"> Increased Bilirubin Decreased hepatic ligandin Increased enterohepatic circulation Usually symptomatic with required treatment |
|  | |

Table 2 – Unconjugated vs. Conjugated Hyperbilirubinemia

| PATHOLOGIC UNCONJUGATED HYPERBILIRUBINEMIA | | CONJUGATED HYPERBILIRUBINEMIA | |
|---|--|---|--|
| HEMOLYTIC | NON-HEMOLYTIC | EXTRAHEPATIC | INTRAHEPATIC |
| INTRINSIC <ul style="list-style-type: none"> G6PD deficiency Hereditary spherocytosis Thalassemia | <ul style="list-style-type: none"> Sepsis Hypothyroidism Cephalohematoma Gilbert Crigler-Najjar | <ul style="list-style-type: none"> Biliary atresia Choledochal cysts Perforated bile ducts Tumour/mass Cystic fibrosis Galactosemia | <ul style="list-style-type: none"> Infections: hepatitis, TORCH, UTI, etc. Drugs: eg. ceftriaxone, sulfonamides, etc. Genetic/metabolic: eg. Alagille syndrome, etc. |
| EXTRINSIC <ul style="list-style-type: none"> Drugs Iso-immune (ABO, Rh) Sepsis | Work-up: Coombs test, CBC with differential, blood smear, blood culture |  Must rule out biliary atresia! Initial investigation: abdominal ultrasound  | |