

Case study 1

A woman who booked early and attended an antenatal clinic regularly, delivers an infant at a primary care clinic. She is 39 weeks by dates and the infant appears to be of normal size. The birth weight is 3100 g. Length 49cm and COH 33.5cm.

1. Why should this infant be weighed?

- All infants should be weighed routinely after delivery, even if they appear normal and healthy, in order to identify all low birth weight infants. An accurate birth weight is also important to determine weight gain or loss during the first days and weeks after birth.

2. Should you assess this infant's gestational age? Why?

- No. The gestational age is known from mother's dates.

3. Should you plot this infant's weight, length and COH using a growth chart? Why?

- Yes. In order to assess whether their growth is appropriate for their gestational age. If it isn't they are at increased risk for developing problems and need to be more closely monitored.

4. How would you classify this infant by its weight and gestational age?

- This is a term, appropriate-for-gestational-age infant and, therefore, is at low risk for problems in the newborn period.

5. Are all infants who weigh 3100 g born at term? Explain your answer.

- No. Most will be term infants. However, some may be underweight for gestational age post term infants while others may be overweight for gestational age preterm infants.

Case Study 2

A woman delivered a baby boy by emergency caesarian section an hour ago. The mother was unbooked and is unsure of her dates. By symphysis fundal height (SFH) you had assessed the approximate gestational age to be 37 weeks. The birth weight is 2250g. Length 47cm and COH 32cm.

1. Please plot these measurements on the Intergrowth International Standards for Size at birth (Boys) Growth chart and describe your findings.

- The length and COH are between the 10th and 90th percentiles.
- The weight is below the 10th percentile.

2. How would you classify this infant?

- The baby is low birth weight as his weight is less than 2500g
- The baby is asymmetrically small for gestational age (SGA).
- The length and COH are appropriate but the weight is below the 10th percentile.

3. Is this better or worse than symmetrical growth restriction? Why?

- Better.
- Only the weight is restricted. This indicates that the intrauterine cause eg placental insufficiency, only occurred shortly before delivery and therefore didn't impact on the length and COH
- If the baby had symmetrical growth restriction all three measures would be below the 10th percentile indicating that the problem had occurred earlier. The baby would be at increased risk for complications as all the organs (including the brain) had not grown optimally

4. What problems is the baby at risk for developing?

- hypothermia, hypoglycaemia, hyperglycaemia, hypocalcaemia, polycythaemia, jaundice, feeding difficulties, feed intolerance, necrotizing enterocolitis, late-onset sepsis

5. Should you assess this infant's gestational age? Why?

- Yes. The mother was unbooked and unsure of dates. The SFH indicated 37 weeks gestation but the baby is SGA. The baby might actually be preterm.

P.T.O

The mother develops a temperature on Day 2 and is diagnosed with puerperal sepsis and needs to remain in hospital for antibiotic treatment. You weigh the baby on Day 4. Its weight is 2140g. The baby is sucking well and all other assessments are normal.

1. Please plot this weight on the Intergrowth International Standards for Size at birth (Boys) Growth chart and describe your findings.

- The baby has lost 110g
- The weight falls below the 3rd percentile

2. How would you counsel the mother?

- Don't worry!
- It is normal for babies to lose up to 10% of their birth weight in the first few days after birth.
- Your baby has only lost 5% and is sucking well and has no other problems.
- He should start gaining weight now and should return to his birth weight by Day 7-10.

The baby is seen at the clinic 10 days after birth. He weighs 2280g. Length 48.5cm and COH 33.5cm. The baby is active and all other assessments are normal. Mother reports that the baby is sucking well approximately every 3hrs.

1. Please plot this weight on the Intergrowth International Standards for Size at birth (Boys) Growth chart and describe your findings.

- The baby has gained 140g
- The weight falls on the 3rd percentile

2. How would you counsel the mother?

- It is normal for the baby to gain about 1% a day. That's about 20g. Your baby has gained about 23g a day.
- Although your baby's weight is still low he is growing appropriately and his length and COH are normal.
- If possible, assess the mother breast feeding to confirm that the baby has good attachment and is sucking well.
- Continue exclusive breastfeeding your baby. Your baby's weight should catch up with normal over the next year or 2.
- Keep coming regularly to the clinic to check that he is growing as he should.