



Case Study 116

Name _____ Class/Group _____ Date _____

Group Members _____

► Scenario

Mr. and Mrs. B. arrive in the emergency department (ED) with their 6-week-old infant, S.B. As the triage nurse, you ask the couple why they have brought S.B. to the ED. Mrs. B. states, "My baby breastfed well for the first couple of weeks but has recently been throwing up all the time, sometimes a lot and really forcefully. He looks skinny and is hungry and fussy all the time." You determine that the couple is homeless and has been living out of their car for the past month. S.B. has had no primary care since discharge after delivery.

1. What additional information will you need to obtain from Mr. and Mrs. B.?

CASE STUDY PROGRESS

Your primary assessment of the infant reveals the following: S.B. is alert and fussy and consoles with a bottle of Pedialyte (per physician orders). His anterior fontanel is slightly depressed and posterior fontanel cannot be palpated. You auscultate regular breath sounds at a rate of 18 breaths/min. No adventitious sounds. Pulse oximetry is 98% on room air. Heart rate is 140 beats/min with regular rate and rhythm. Brachial and pedal pulses are +3 and equal. Abdomen is round and nontender to palpation. Positive bowel sounds. Diaper is dry. S.B. moves all extremities and there are no rashes noted. Rectal temperature is 98.9° F (37.2° C). There is a quarter-sized flat red area on occiput that "has been there since he was born" according to the mother. Slight "tenting" noted.

You transport S.B. to radiology and he vomits a large amount of clear fluid. Patient returns to the room in his mother's arms, awake and alert. The mother appears anxious and states, "I don't know what's wrong with my baby! Why can't you people tell me anything?"

2. Your institution uses electronic charting. Based on the assessment described, which of the following systems would you mark as abnormal as you document your findings? Mark abnormal findings with an "X" and provide a brief narrative note.

X Abnormal

- Neurologic:
- Respiratory:
- Cardiovascular:
- Gastrointestinal:
- Genitourinary:
- Musculoskeletal:
- Skin:
- Psychosocial:
- Pain:

3. The emergency physician orders a complete blood count, complete metabolic profile, urinalysis, blood pH, and x-rays. The physician suspects dehydration and metabolic alkalosis secondary to hypertrophic pyloric stenosis. Which of these laboratory findings would you expect with metabolic alkalosis?
- a. Na: 128 mEq/L, K: 2.6 mEq/L, Cl: 90 mEq/L, HCO_3^- : 28 mEq/L
 - b. Na: 130 mEq/L, K: 5.7 mEq/L, Cl: 94 mEq/L, HCO_3^- : 22 mEq/L
 - c. Na: 130 mEq/L, K: 3.9 mEq/L, Cl: 98 mEq/L, HCO_3^- : 17 mEq/L
 - d. Na: 148 mEq/L, K: 4.1 mEq/L, Cl: 108 mEq/L, HCO_3^- : 13 mEq/L

4. What is the underlying cause of S.B.'s diagnosis of metabolic alkalosis?

5. Which of these clinical manifestations might you find with metabolic alkalosis? Select all that apply.
 - a. Increased respiratory rate
 - b. Tetany
 - c. Increased risk for seizures
 - d. Hyperthermia
 - e. Neuromuscular irritability

6. What additional assessment findings might reflect the consequences of frequent prolonged vomiting in the infant?

CASE STUDY PROGRESS

S.B. is diagnosed with hypertrophic pyloric stenosis, admitted to the pediatric unit, and scheduled for surgery.

7. S.B.'s parents are concerned that their living situation contributed to S.B.'s diagnosis. How would you respond to their concerns?

8. Mr. and Mrs. B. have questions about the necessity of surgery and question what is going to be done next. What are your responsibilities as you respond to Mr. and Mrs. B.'s concerns?

9. Which of these preoperative orders would you question?

Chart View

Preoperative Orders

Vital signs q4h
Strict intake and output (I&O)
30 mL Pedialyte q3h PO
Place IV and begin D₅½NS at 50 mL/hr
Nasogastric (NG) tube placed to low continuous wall suction
Daily weights

10. Which of these interventions can be delegated to nursing assistive personnel (NAP)? Select all that apply.
- Teaching parents the rationale for NG tube insertion
 - Reminding parents to save diapers to be weighed
 - Obtaining VS every 4 hours and reporting any abnormal findings to the RN
 - Assisting parents in holding infant without removing NG tube
 - Assessing for NG tube placement every shift
11. You note that your patient was hypokalemic and the fluids you hung per orders do not include potassium. You contact the surgeon to clarify. You receive the following order: "Discontinue D₅½NS at maintenance and hang D₅½NS with 20 mEq KCl at maintenance." You obtain the new fluids and hang per orders. True or False: This is an appropriate nursing action. Explain your answer.

CASE STUDY PROGRESS

S.B. returns to your unit after a pyloromyotomy. Mrs. B. is concerned about when she will be able to resume breastfeeding and what they need to do for their baby.

12. What postoperative teaching would you provide to them?

CASE STUDY OUTCOME

S.B. progresses well and is tolerating normal breastfeeding within 48 hours with minimal vomiting. He is discharged with follow-up in 2 weeks with the parents' new primary care provider. A social worker has helped Mr. and Mrs. B. obtain temporary housing and apply for available insurance.