

Fever

Application Exercises

EXERCISE I

Clinical Scenario

A three-week-old boy is sent to the emergency department by an urgent care clinic because “he might have a urinary tract infection.” He was born at 40 weeks’ gestation following an uncomplicated pregnancy throughout which the mother received routine prenatal care. Following a normal spontaneous vaginal delivery, he was discharged home with his mother on the second day of life. He has done well with no concerns until today when he was fussier than usual, but easily consoled. There has been no change in his breastfeeding or sleep patterns. He has had no vomiting, diarrhea, or respiratory issues. He was taken to an urgent care center where a catheterized urine was obtained. Urinalysis showed many white cells and bacteria, and the dipstick was positive for leukocyte esterase and nitrite. A urine culture is pending. The parents were told to bring the patient directly to the emergency department. On exam, his rectal temperature is 38.5°C, heart rate 145 bpm, respiratory rate 34 bpm. There are no focal findings on physical examination.

Question 1.1 When considering high-value care, which of the following will be least helpful in your evaluation:

- A. 2–3 ml. of blood for a blood culture
- B. Chest x-ray
- C. Complete blood count and differential
- D. Evaluation of cerebrospinal fluid
- E. Nasopharyngeal swab for viruses

Question 1.2 After sending appropriate laboratory studies, the decision was made to start antibiotics empirically, being sure to cover the urinary tract infection. Of the following, which is the best choice?

- A. Ampicillin and gentamicin
- B. Ampicillin and ceftriaxone
- C. Ciprofloxacin
- D. Trimethoprim/sulfamethoxazole
- E. Vancomycin and cefotaxime

EXERCISE 2

Clinical Scenario

A three-year-old girl is brought to the emergency department because she has a fever and her “knee hurts” on the right side. She was in her usual state of good health until two days before presentation when she became less active and developed a fever to 101°F. She refused to eat her dinner and went to bed early. Yesterday she wouldn’t eat and just wanted to lie down, saying her knee hurt. She continued to have a fever and it responded to acetaminophen. Today her temperature went up to 102.5°F and she has been very irritable. She refuses to bear weight on her right leg and would not eat or drink anything. There is no history of trauma. She did have an upper respiratory tract infection several days ago. On physical exam, she is irritable and uncooperative. Vital signs: pulse 140 bpm; respiratory rate 32 bpm; temp 102.5°F; blood pressure: patient wouldn’t cooperate; oxygen saturation 98% on room air. Physical examination showed an irritable child who would sit quietly until anyone tried to touch her. HEENT significant for tacky oral mucosa. Cardiac exam showed tachycardia and a capillary refill of 2 seconds. Respiratory exam normal. Unremarkable abdominal exam. Examination of the extremities was remarkable for the right leg only. When she was quiet, she would sit with her knee flexed and her hip flexed and abducted. There was no erythema or swelling evident at any joint. She cried, saying it hurt when you touched her right leg anywhere.

Question 2.1 Which of the following is your top priority for your evaluation/management?

- A. Administer intravenous antibiotics
- B. Administer intravenous fluids
- C. Obtain a blood culture
- D. Ultrasound of hip
- E. X-ray of knee