

Fever

Readiness Assurance Questions

1. A four-month-old, previously healthy girl is brought to the physician for 24 hours of fever and fussiness. She has no other reported symptoms, and her mother has not seen any rashes. She is up to date with her immunizations and is scheduled to receive her 4-month-old vaccines in a few days. Her temperature is 39.4 C, respiratory rate is 45 bpm, and heart rate is 150 bpm. She is awake and alert, and interactive. The rest of the physical exam is unremarkable and shows no obvious source of infection. On evaluation, a urinalysis is normal. Her white blood cell count is 15,500 with 80% polymorphonuclear leukocytes, 5% bands, and 15% lymphocytes. As part of her evaluation, a blood culture is obtained. Within 24 hours, the blood culture is reported to be positive, gram stain pending. Which of the following bacteria is most likely to have caused her bacteremia?

- A. *Escherichia coli*
- B. Group B hemolytic streptococcus
- C. *Listeria monocytogenes*
- D. *Neisseria meningitidis*
- E. *Streptococcus pneumoniae*

2. A 7-month-old girl is brought to the physician for three days of fever without cough, congestion, or a rash. She has been irritable but consolable, and continues to eat well with no emesis or diarrhea. Temperature is 38.0 C, respiratory rate 35 bpm, heart rate 140 bpm. Physical examination shows an alert and consolable infant who prefers to be held by her mother, and no obvious source for the fever. Which of the following is the most appropriate next step in management?

- A. Admit for observation
- B. Blood culture
- C. Catheterized urine for urinalysis and culture
- D. CT scan of the head
- E. Lumbar puncture

3. A 4-year-old girl is brought to the Emergency Department with a one-day history of sudden onset of fever and refusing to walk. She was well the day before the fever. She is complaining of pain in the right knee and wants to keep her leg extended. Temperature is 40 C, heart rate is 157 bpm, and respiratory rate is 30 bpm. She is fussy and complaining of pain. Her right knee is swollen, red, warm to the touch, and an effusion is present. There is decreased range of motion of the knee. All other joints appear normal. White blood cell count is 27,000 with 87% neutrophils and 10% lymphocytes. Which of the following is the best next step in management?

- A. Blood culture
- B. Bone scan
- C. MRI of the knee
- D. Needle aspiration of the knee
- E. Ultrasound of the knee

4. A 6-year-old girl is brought to the physician with fever, sore throat, and decreased oral intake. Her mother pushed her to drink a 24-ounce bottle of a sports drink, but the girl vomited about 5 minutes after finishing it. She has had no other vomiting or diarrhea but the mother notes less frequent urination. On physical examination, she is sleepy but responds appropriately to your questions. Her weight is 20 kg, temperature 38.1 C, respiratory rate 28 bpm, pulse 140 bpm, and blood pressure 110/60 mm Hg. Capillary refill time is 3 seconds. Which of the following is the safest therapy for this child?

- A. Give 400 ml IV normal saline bolus, followed by IV D5 1/2 normal saline at 60 ml per hour
- B. IV D5 1/2 normal saline at 60 ml per hour
- C. IV D5 1/2 normal saline at 120 ml maintenance
- D. No therapy is needed
- E. Oral rehydration solution, 5-10 ml every 5-10 minutes, and advance gradually

5. A 4-year-old girl presents to the Emergency Department with fever and vomiting. She has a history of recurrent urinary tract infections and was last treated for a UTI three months ago with trimethoprim/sulfamethoxazole, an antibiotic that has usually been effective for her. She was seen in the clinic 2 days ago with dysuria, frequency, and urinary incontinence. A urinalysis obtained at that time was cloudy with positive leukocyte esterase. On microscopic exam, the urine showed many white cells and many bacteria. She was started on trimethoprim/sulfamethoxazole. Today, she developed a fever that has been as high as 38.3 C, and has started vomiting everything she eats and drinks. She vomited her antibiotic within a minute of taking it. You call the microbiology laboratory and learn that her urine is growing greater than 100,000 colonies per ml. of *Enterococcus faecalis*, and sensitivities are pending. You decide to admit her for parenteral antibiotics. Which of the following would be the most appropriate choice for her?

- A. Intravenous ampicillin
- B. Intravenous ceftriaxone
- C. Intravenous ciprofloxacin
- D. Intravenous trimethoprim/sulfamethoxazole
- E. Intravenous vancomycin