AHD questions 8/6/2024

A 37-year-old woman is evaluated in the emergency department for fever 1 week after her second cycle of chemotherapy for breast cancer. She has no focal symptoms, is otherwise healthy, and takes no medications. The patient lives with her partner 20 minutes from the hospital.

On physical examination, temperature is 38.3 °C (101 °F); other vital signs are normal. She appears well. There is a healed right mastectomy incision, and the left chest port is in place without erythema or tenderness.

Laboratory studies show a leukocyte count  of 1,600/µL (1.6 × 10 9/L) with an absolute neutrophil count  of 600/μL (0.6 × 109/L), hemoglobin  level of 11.1 g/dL (111 g/L), and platelet count  167,000/µL (167 × 10 9/L). Urinalysis and basic metabolic panel are normal. Blood cultures are obtained.

Chest radiograph is normal.

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Which of the following is the most appropriate treatment for this patient?

1. Begin cefepime; admit the patient
2. Begin cefepime and gentamicin; admit the patient
3. Begin ciprofloxacin and amoxicillin/clavulanic acid; discharge the patient home
4. Discharge the patient home with close follow-up

Bottom of Form

A 62-year-old woman undergoes preoperative evaluation for total hip arthroplasty. Medical history is notable for diabetes mellitus, osteoarthritis, and liver transplantation 7 years ago for hepatitis C–related cirrhosis. Medications are tacrolimus, mycophenolate, metformin, and acetaminophen.

On physical examination, vital signs are normal. She has limited active right hip range of motion, but physical examination findings are otherwise normal.

Microscopic urinalysis results show 5-10 erythrocytes/hpf, 10-20 leukocytes/hpf, and 3+ bacteria.

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Which of the following is the most appropriate management of this patient's bacteriuria?

1. Cancelation of surgery
2. Extended surgical antibiotic prophylaxis postoperatively
3. Presurgical trimethoprim-sulfamethoxazole
4. Urine culture and sensitivity
5. No further management

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A 34-year-old woman is evaluated in the emergency department for a 3-day history of increasing urinary frequency, urgency, and burning accompanied by right flank pain, fever, chills, nausea, and vomiting. She was treated with trimethoprim-sulfamethoxazole for cystitis 2 weeks ago. Medical history is also significant for nephrolithiasis. Her only other medication is an oral contraceptive pill. She reports experiencing a rash with amoxicillin in childhood, but no adverse reactions to cephalosporin medications.

On physical examination, temperature is 38.9 °C (102 °F), blood pressure is 92/60 mm Hg, and pulse rate is 96/min. Palpation elicits right-sided costovertebral angle punch tenderness.

Urinalysis reveals cloudy urine with greater than 100 leukocytes/hpf, 0-5 erythrocytes/hpf, and 4+ bacteria. A urine pregnancy test is negative.

Bilateral, nonobstructing, small ureteral-pelvic junction calculi are seen on kidney ultrasound.

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Which of the following is the most appropriate intravenous treatment?

1. Aztreonam
2. Ceftriaxone
3. Ciprofloxacin
4. Levofloxacin
5. Trimethoprim-sulfamethoxazole

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A 68-year-old man is evaluated for a 2-week history of fever and malaise. Medical history is significant for kidney transplantation 9 months ago. Donor serology was positive for cytomegalovirus, and the patient was seronegative; he received valganciclovir prophylaxis for 6 months after transplantation. Medications are tacrolimus, mycophenolate mofetil, prednisone, and trimethoprim-sulfamethoxazole.

On physical examination, temperature is 38.1 °C (100.6 °F); other vital signs are normal. The physical examination is normal.

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| *Laboratory studies:* |
|  | **Today** | **1 Month Ago** |
| Leukocyte count  | 2200/µL (2.2 × 109/L) | 6400/µL (6.4 × 109/L) |
| Platelet count  | 100,000/µL (100 × 109/L) | 180,000/µL (180 × 109/L) |
| Creatinine  | 1.2 mg/dL (106 µmol/L) | 1.1 mg/dL (97.2 µmol/L) |
| Alanine aminotransferase  | 92 U/L | Normal |
| Aspartate aminotransferase  | 80 U/L | Normal |

A chest radiograph is normal.

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Which of the following infections is most likely present in this patient?

1. Cytomegalovirus
2. *Pneumocystis jirovecii*
3. Polyomavirus BK
4. Polyomavirus JC

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