

## Chapter 59. Gout and Hyperuricemia, Self-Assessment Questions

1. Which one of the following statements concerning febuxostat in the treatment of gout is *correct*?

- A. It is more effective in reducing acute gouty flares than allopurinol titrated to the serum uric acid (SUA) target.
- B. It should not be used in patients with a history of allopurinol hypersensitivity syndrome.
- C. Liver function tests should be monitored when initiating and titrating therapy.
- D. Combination therapy with allopurinol and febuxostat can achieve greater decreases in SUA than either agent alone.
- E. Febuxostat should be avoided in patients with mild-to-moderate renal impairment.

2. What would be an appropriate starting dose of allopurinol in a 55-year-old man with gout and chronic kidney disease if his serum creatinine is 2.1 mg/dL (186  $\mu$ mol/L)? He is 5'7" (170 cm) and weighs 75 kg (165 lb).

- A. 50 mg daily
- B. 100 mg every other day
- C. 100 mg daily
- D. 300 mg daily
- E. Allopurinol is not recommended in patients with chronic kidney disease

3. A 42-year-old woman presents to her family physician 48 hours after the onset of her third acute gout flare this year with complaints of severe pain and swelling of her left knee. She is

currently prescribed febuxostat 40 mg once daily (initiated last month) and her serum uric acid today is 9.6 mg/dL (571  $\mu\text{mol/L}$ ). Except for gout, her past medical history is unremarkable, and she is adherent to current therapy. What do you recommend to optimize the patient's pharmacotherapy regimen?

- A. Increase febuxostat to 80 mg daily and add colchicine for acute treatment followed by anti-inflammatory prophylaxis.
- B. Continue febuxostat 40 mg daily and add naproxen for acute treatment followed by anti-inflammatory prophylaxis.
- C. Continue febuxostat 40 mg daily and add colchicine for acute treatment followed by anti-inflammatory prophylaxis.
- D. Increase febuxostat to 80 mg daily and add naproxen for acute treatment followed by anti-inflammatory prophylaxis.
- E. Continue febuxostat 40 mg daily and add probenecid for additional urate lowering once acute attack resolves.

4. Which one of the following statements concerning indomethacin use in acute gout is *correct*?

- A. Studies have determined that indomethacin is the most effective NSAID in acute gout.
- B. Indomethacin should be avoided because of its cost relative to other NSAIDs.
- C. Other NSAIDs may be as effective as indomethacin in acute gout with more favorable safety profiles.
- D. Colchicine is more effective than indomethacin in acute gout.
- E. Corticosteroids are more effective than indomethacin in acute gout.

5. Which one of the following patients should be considered for initiation of urate-lowering therapy?

- A. A patient experiencing his first acute attack with multiple tophi on his knee.
- B. A patient experiencing his first acute attack with stage 1 chronic kidney disease.
- C. An asymptomatic patient with a serum uric acid (SUA) of 15 mg/dL (892  $\mu$ mol/L).
- D. A patient after resolution of a severe second attack of gout in the past 2 years.
- E. A patient with a strong family history of gout who is started on niacin therapy.

6. A 70-year-old patient with chronic gout develops a mild maculopapular rash 1 week after initiating allopurinol therapy, and alternative therapy to lower his SUA is considered. His past medical history is significant for hypertension, obesity, and chronic kidney disease (last estimated creatinine clearance 25 mL/min [0.42 mL/s]). Which one of the following statements is *true* concerning this case?

- A. Probenecid would be an appropriate choice for treatment of chronic gout.
- B. Allopurinol desensitization could be attempted in this patient.
- C. High-dose febuxostat would be needed to reach SUA goals in this patient.
- D. The dose and schedule of pegloticase would be the most convenient option for the patient.
- E. None of the above responses are correct.

7. A patient with a history of severe chronic gout, including multiple tophi and uric acid nephropathy, is being considered for pegloticase therapy because other treatments have failed to lower the SUA to goal. His past medical history is significant for hypertension, asthma, and

dyslipidemia. He smokes one pack of cigarettes daily and works as a long-haul truck driver.

Which one of the following statements is true concerning this case?

- A. Asthma is a contraindication to pegloticase treatment.
- B. Pegloticase would not be expected to be effective if other standard treatments have failed.
- C. The patient should be screened for G6PD deficiency prior to initiation.
- D. If pegloticase is initiated, the patient should be premedicated with fexofenadine 180 mg IV and omeprazole 40 mg po prior to the infusion.
- E. Pegloticase should be used in combination with allopurinol to prevent rebound gouty flares.

8. An emergency room physician asks you why a lower dose of colchicine is now recommended for treatment of acute gout flares. What is your response?

- A. The lower dosage regimen is associated with fewer gastrointestinal adverse effects.
- B. Although the lower dose of colchicine is less effective, it is also safer and thus preferred.
- C. Since most patients with gout are taking allopurinol, the chance of a drug interaction is less if the lower dose of colchicine is used.
- D. The lower dose of colchicine is associated with less liver toxicity.
- E. None of the above responses are correct.

9. A 55-year-old man is newly diagnosed with gout and hyperuricemia. His past medical history is significant for type 2 diabetes, dyslipidemia, and hypertension, all well controlled.

Medications include atorvastatin 40 mg at bedtime, niacin 1000 mg at bedtime, lisinopril 10 mg daily, metformin 500 mg twice daily, and aspirin 81 mg daily. He does not meet criteria for urate-lowering therapy, and the physician wishes to implement other antihyperuricemic measures. What is the best recommendation?

- A. Consider changing lisinopril to losartan.
- B. Add fenofibrate to current lipid-lowering therapy.
- C. Consider changing lisinopril to hydrochlorothiazide.
- D. Discontinue aspirin 81 mg daily.
- E. Increase niacin to 1500 mg at bedtime.

10. Which one of the following statements is *true* regarding anti-inflammatory prophylaxis during initiation of urate-lowering therapy?

- A. It is not recommended during initiation of allopurinol therapy in patients with renal insufficiency.
- B. Colchicine 1.2 mg orally for one dose followed by 0.6 mg 1 hour later is the recommended first-line regimen.
- C. Naproxen is less likely to cause renal insufficiency than other NSAIDs for anti-inflammatory prophylaxis.
- D. Low-dose NSAID therapy should be combined with acid suppression therapy to prevent GI adverse effects.
- E. Low-dose prednisone is the recommended first-line therapy for anti-inflammatory prophylaxis.

11. Which combination regimen is *inappropriate* for managing severe pain during an acute gouty attack?

- A. Colchicine + NSAID
- B. NSAID + oral corticosteroid

- C. Colchicine + oral corticosteroid
- D. Oral corticosteroid + intraarticular corticosteroid
- E. NSAID + intraarticular corticosteroid

12. Which one of the following nonpharmacologic measures may be helpful in providing pain relief from an acute gouty attack?

- A. Application of heat
- B. Application of ice
- C. Compression hose applied to the affected area
- D. Increased oral intake of water
- E. Brisk massage of the affected area

13. A 35-year-old man presents to an urgent care clinic with signs and symptoms consistent with acute gouty arthritis of his right ankle. Uric acid crystals are found in the aspirated articular fluid from the ankle. He has a history of poorly controlled dyslipidemia and drinks three beers nightly. He is an avid runner and reports eating fruits, vegetables, and low-fat dairy products. Which of the following sets of characteristics are risk factors for gout in this patient?

- A. Male sex and intense physical activity
- B. Consumption of alcohol and low-fat dairy products
- C. Dyslipidemia and alcohol consumption
- D. Age and consumption of low-fat dairy products
- E. Dyslipidemia and age

14. In which patient population should HLA-B\*5801 screening be considered prior to allopurinol initiation?

- A. Routine screening is recommended for all patients
- B. Patients of Korean descent with stage 2 or worse chronic kidney disease
- C. Patients with a history of Stevens-Johnson syndrome
- D. Caucasian patients with chronic kidney disease
- E. All patients of Thai descent

15. A patient with gout has recently been started on allopurinol and is undergoing dose titration.

What laboratory test should be monitored at monthly follow-up visits during this period?

- A. Urinalysis
- B. Serum urate
- C. Serum creatinine
- D. Aspartate aminotransferase
- E. No routine lab monitoring is required

## Answers

1. C

2. C

3. D

4. C

5. A

6. B

7. C

8. A

9. A

10. D

11. B

12. B

13. C

14. E

15. B