

Chapter 54. Allergic and Pseudoallergic Drug Reactions, Self-Assessment Questions

1. Of all adverse drug reactions reported in hospitals, the percentage of these that are allergic or immunologic is:

- A. 33%
- B. 50% to 60%
- C. 5% to 10%
- D. 1% to 2%
- E. > 95%

2. Fifteen minutes after the start of a piperacillin/tazobactam infusion, the patient develops severe itching and difficulty breathing. What type of Gell and Coombs reaction is occurring?

- A. Type I
- B. Type II
- C. Type III
- D. Type IVa
- E. Type IVb

3. A site of drug metabolism that might explain why skin reactions occur with a variety of different drugs is:

A. Skin keratinocytes

B. The kidney

C. Skin epidermocytes

D. The liver

E. The lungs

4. What type(s) of Gell and Coombs reactions can penicillins cause?

A. Types I and II only

B. Types II and III only

C. Types I and III only

D. Type I only

E. Types I, II, III, and IV

5. Pseudoallergic drug reactions differ from allergic reactions in that they:

A. Are based on the structure of the drug

B. Involve the activation of the patient's immune system

C. Represent common biological functions such as direct histamine release

D. Require the drug to be bound to a protein

E. Involve T-cell activation

6. Of patients claiming to have penicillin allergies, what percentage will have a negative penicillin skin test?

A. 5%

B. 33%

C. 50%

D. 75%

E. 90%

7. Cross-allergenicity between penicillins and cephalosporins:

A. Occurs at a low rate, less than 6%

B. Is uncommon, less than 0.05%

C. Is common, greater than 90%

D. Is variable but most studies estimate around 50%

E. Never occurs

8. A patient with an allergy to aztreonam should not receive which of the following cephalosporins?

A. ceftazidime

B. cephalexin

C. cefotetan

D. cefepime

E. ceftiofime

9. The drug or drug class that is responsible for the most cases of toxic epidermal necrolysis is:

A. β -Lactam antibiotics

B. Sulfonamide antibiotics

C. Insulin

D. Thiazide diuretics

E. Sulfonylureas

10. The immediate intervention with an anaphylactic reaction in an adult should be:

A. Intravenous epinephrine 1 to 4 mcg/min and titrate to response

B. Intramuscular epinephrine (1:1000) 0.3 mg then repeat every 5 minutes as needed

C. Subcutaneous epinephrine (1:1000) 0.6 mg then repeat every 5 minutes as needed

D. Intramuscular epinephrine (1:1000) 0.3 mg then repeat every 15 minutes as needed

E. Intramuscular epinephrine (1:10,000) 0.3 mg then repeat every 5 minutes as needed

11. Which of the following statements is *false*?

A. IgE-mediated reactions can occur with aspirin.

B. A patient who has experienced an allergic or pseudoallergic reaction to aspirin should never receive aspirin for primary or secondary prevention in coronary artery disease.

C. The potential cross-reactivity for IgE-mediated reactions between aspirin and COX-1 inhibiting nonsteroidal anti-inflammatory agents is fairly small.

D. Cross-reactivity between COX-2 inhibitors and aspirin are rare.

E. Chronic idiopathic urticaria is a major risk factor for aspirin-induced pseudoallergic reactions.

12. Which of the following steps should be taken in patients at greater risk for reactions to radiocontrast media?

A. Use diuretics to minimize fluid volume

B. Use higher osmolar agents

C. Pretreat with prednisone and diphenhydramine

D. Use ionic osmolar agents

E. Use desensitization process

13. A person taking oxycodone 5 mg/acetaminophen 325 mg, two tablets every 4 hours as needed for pain, starts itching all over within 20 minutes of each dose. Which of the following statements is *true*?

A. The itching is most likely due to the oxycodone stimulating mast cell release.

B. The itching is most likely due to a Gell and Coombs Type I reaction.

C. The itching is a warning that the patient is allergic to opiates and should not receive them.

D. The itching is most likely due to the underlying cause of the patient's pain.

E. The itching is an early sign of anaphylaxis and the patient should receive epinephrine immediately.

14. Cross-sensitivity among phenytoin, carbamazepine, and phenobarbital ranges from:

A. 0% to 1%

B. 5% to 10%

C. 20% to 30%

D. 40% to 80%

E. 90% to 100%

15. Which of the following statements is/are true regarding drug desensitization?

- A. Desensitization can be performed safely in an outpatient clinic setting.
- B. More patients are harmed by withholding a medication or using a less effective alternative agent than by desensitization.
- C. Type I, II, III, and IV reactions can be prevented with drug desensitization.
- D. Similar to allergy shots, drug desensitization may take months before the patient is adequately desensitized.
- E. All of the above are true.

Answers

1. C

2. A

3. A

4. E

5. C

6. E

7. A

8. A

9. B

10. B

11. B

12. C

13. A

14. D

15. B