Hypersensitivity Reactions to Biological Drugs

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CME Items

1. Which of the following statements is not true?
   a. Omalizumab is a humanized monoclonal antibody
   b. Hypersensitivity reactions to natalizumab are induced by a drug metabolite
   c. Hypersensitivity reactions to rituximab can occur with the first administration of the drug
   d. Anticetuximab IgE antibodies act against α-gal antigen

2. In the study of hypersensitivity reactions to biological drugs, which of the following is it important to know?
   a. The degree of drug humanization
   b. The excipients contained in the marketed drug
   c. The cell line from which the drug is obtained
   d. All of the above

3. With respect to biological drugs, which of the following is true?
   a. The percentage of patients with acneiform rash induced by cetuximab is less than 10%
   b. In humanized monoclonal antibodies, 2-5% of the immunoglobulin Fab fragment is from mice
   c. Injection site reactions usually appear immediately after drug administration
   d. Hypersensitivity reactions are classified as alfa-type reactions

4. Which one of the following statements is true?
   a. The name of the fusion proteins end in -cept
   b. In the study of hypersensitivity to omalizumab, intradermal testing should be performed at a maximum concentration of 1/10
   c. Desensitization is not effective for rituximab
   d. Injection site reactions produced by infliximab are frequent

5. Which of the following applies to non–isotype-specific anti-infliximab antibodies?
   a. They are very specific for anaphylactic reactions to infliximab
   b. There is a close correlation between the levels of these antibodies and the incidence of reactions, especially mild to moderate reactions.
   c. An antibody titer ≥8 µg/mL predicts an increased risk of reaction
   d. b and c are correct

6. Which of the following is true for allergic reactions to adalimumab?
   a. They are rare
   b. They are usually delayed reactions
   c. They are commonly mild and occur at the injection site in up to 20% of patients
   d. They are a frequent cause of discontinuation of treatment

7. Which of the following is true of etanercept?
   a. It is a monoclonal anti-TNF antibody
   b. It induces antinuclear antibodies in 18% of patients
   c. Injection site reactions are reported in 97% of patients with psoriasis treated with this drug
   d. All are correct

8. Interferons constitute a group of related proteins classified according to the source from which they were originally obtained. Which of the following belong to the group?
   a. Interferon alfa, formerly leukocyte interferon
   b. Interferon beta, formerly fibroblast interferon
   c. Interferon gamma, formerly immune interferon
   d. They all belong to the group

9. Which of the following statements is true for skin reactions with interleukin-2 or interferons?
   a. Local reactions at the interleukin-2 injection site are observed in 50% to 60% of cases
   b. Erythematous reactions appear in up to 75% of patients treated with interferon beta
   c. Painful erythematous plaques are more common with interferon beta-1b than with interferon beta-1a
   d. Answers b and c are correct

10. As regards hypersensitivity reactions to colony-stimulating factors, which of the following statements is correct?
    a. Cross-reactivity between these drugs is low
    b. Desensitization methods are frequently used when these reactions occur
    c. Twenty-five percent of patients treated with filgrastim present hypersensitivity reactions
    d. Pegfilgrastim is the colony-stimulating factor most frequently involved in hypersensitivity reactions