

Rapid Drug Desensitization for Hypersensitivity Reactions to Chemotherapy and Monoclonal Antibodies in the 21st Century

Instructions for obtaining 1.3 Continuing Medical Education Credits

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CME Items

1. A 54-year-old asthmatic woman is diagnosed with ovarian cancer. After surgery, she receives 6 infusions of carboplatin and paclitaxel. Her cancer relapses after 9 months and she re-initiates carboplatin and paclitaxel. Which of the following is the patient at risk of?
 1. Carboplatin reaction
 2. Paclitaxel reaction
 3. Reactions to both drugs, since she is asthmatic
 4. She has no risk of reaction
2. During the fourth cycle, the patient presents itchy hands and erythema at the end of the carboplatin infusion and mild oxygen desaturation and is able to finish the infusion with oxygen supplementation and diphenhydramine. Which of the following approaches is best?
 1. Continue treating with carboplatin, since this is a mild reaction
 2. Premedicate with increased doses of antihistamines
 3. Perform a skin test and, if positive, proceed to desensitization
 4. Discontinue carboplatin
3. A 23-year-old man presents with rheumatoid arthritis and is prescribed infliximab, which is administered every 4 weeks for 10 weeks without problems. During his last infusion, he develops flushing, back pain, dizziness with shortness of breath, and chills. What is the most likely cause of the reaction?
 1. IgE-mediated reaction to infliximab
 2. Cytokine storm due to macrophage activation
 3. Sepsis due to TNF- α blockade
 4. Dehydration
4. The rheumatologist of the patient in question 3 indicates that infliximab would be the best treatment option. Which of the following would be the best approach?
 1. To increase doses of premedication
 2. To change to other TNF- α blockers
 3. To perform skin testing and, if positive, indicate desensitization
 4. To avoid infliximab
5. A 70-year-old woman with newly diagnosed ovarian cancer is starting treatment with paclitaxel and carboplatin. A few minutes into the administration of paclitaxel she experiences acute back pain, dizziness, and hypotension, and the infusion is stopped. She is treated with epinephrine, corticosteroids, and antihistamines. Which of the following is indicated?
 1. To retry paclitaxel infusion with increased doses of premedication
 2. To replace paclitaxel with docetaxel
 3. To measure tryptase in serum within 30-60 minutes of the reaction
 4. To avoid carboplatin, since the patient is at risk for a reaction
6. The patient's tryptase level is 40 ng/mL (normal value, 11.5 ng/mL), and the oncologist indicates that paclitaxel should be the first line of treatment. Which of the following is the best approach?
 1. To avoid paclitaxel, since the reaction was anaphylactic, as indicated by the elevated tryptase level
 2. To replace paclitaxel with docetaxel, since most paclitaxel reactions are due to Cremophor, its diluent
 3. To premedicate with increased corticosteroids, since elevation of tryptase is mild
 4. To proceed with skin testing and desensitization
7. Which of the following can be applied to antigen desensitization of mast cells?
 1. It is a universal phenomenon that precludes activation with other allergens
 2. It is due to depletion of mediators
 3. It results in the internalization of Fc ϵ RI and specific IgE, thus depleting the cell membrane of receptors
 4. It is temporary and inhibits calcium flux
8. Patients presenting flushing and shortness of breath during desensitization are candidates for which of the following premedications?
 1. Antihistamines
 2. Corticosteroids
 3. Acetylsalicylic acid/montelukast
 4. Oxygen
9. Patients presenting hypersensitivity reactions to monoclonal antibodies treated with multiple desensitizations tend to have
 1. Increased reactions during desensitization
 2. Decreased reactions during desensitization
 3. No changes from the first desensitization
 4. Increased delayed reactions after desensitization
10. Which of the following are true of most patients with initial anaphylactic reactions during desensitization?
 1. They tend to present severe reactions
 2. They tend to present mild-to-moderate reactions
 3. They need more premedication
 4. They cannot tolerate desensitization