

CONTINUING MEDICAL EDUCATION EXAMINATION

Hypersensitivity Reactions to Cancer Chemotherapy: Practical Recommendations of ARADyAL for Diagnosis and Desensitization

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CME Items

- Which of the following statements regarding the diagnosis of hypersensitivity reactions to chemotherapeutic drugs is correct?
 - Skin tests should be the first step in diagnosis and can be used to guide the method of re-exposure
 - Patch tests are not effective in the diagnosis of nonimmediate reactions
 - The drug provocation test is the gold standard for confirming or ruling out hypersensitivity reactions
 - All of the above are correct
- Which of the following cytokines is proposed as a biomarker of cytokine release reactions?
 - IL-10
 - IL-5
 - IL-6
 - None of the above
- Which of the following is true for patients with nonimmediate hypersensitivity reaction?
 - They never be desensitized.
 - They can be desensitized only if there is no liver or kidney involvement.
 - They can be desensitized only if 1 organ is involved, usually the skin.
 - They should be desensitized if there is mucosal involvement.
- Which of the following is correct?
 - In rapid drug desensitization mast cells become unresponsive to the drug (antigen) when starting at a normal concentration (1/1).
 - In murine models, rapid drug desensitization is achieved by increasing the dose 1.5- to 2.5-fold at each step and at fixed time intervals.
 - Desensitization does not impair the internalization of the antigen/IgE/FcεRI complexes but increases some signal-transducing molecules, such as Syk
 - Rapid drug desensitization is antigen–nonspecific, meaning that the activating signal transduction pathways are locked for any allergen.
- Which of the following is not the role of an allergist in a desensitization program?
 - Being responsible for the allergological study.
 - Prescribing the oncological treatment and doses.
 - Supervising the desensitization procedure.
 - Assessing the risk stratification and desensitization steps.
- Which one of the following answers is false?
 - The incidence of hypersensitivity reactions to platins is directly related to the number of exposures.
 - Reactions to taxanes occur mainly during the first cycle.
 - A change in monoclonal antibody reactions from phenotype I to cytokine release reaction may occur during desensitization.
 - Fully human monoclonal antibodies cannot elicit an immune response.
- Which of the 4 phenotypes best describes the following reaction?

“Patient in the fourth cycle of carboplatin treatment who, a few minutes after starting the drug, develops a reaction with flushing, dyspnea, tachycardia, nausea, weakness, and diaphoresis.”

 - Phenotype 1
 - Cytokine release reaction
 - Mixed
 - Indeterminate
- Type I reactions encompass mast cell/basophil activation that will lead to the release of mediators through the activation of various receptors including the low affinity receptor for IgG (FcγRIIA). Which of the following apply?
 - True
 - Only if the causative drug is a monoclonal antibody.
 - False
 - a and b are correct.
- Which of the following best describes breakthrough reactions during rapid drug desensitization (3 bag/12 step)?
 - Infrequent, mostly mild, and generally occur during the last steps (7-12)
 - Infrequent, as severe as the original reaction and generally occur during the first steps of the last bag.
 - Frequent, mostly mild, and associated with a positive skin test result with the chemotherapeutic or monoclonal antibody
 - Infrequent, mostly grade 3, and occur during the first bag
- Which of the following is correct with respect to premedication in rapid drug desensitization?
 - There is strong evidence of its effect for reducing the risk of breakthrough reactions
 - Antihistamines (H1 and H2) are frequently used in the schedules
 - Fluids and normal saline have not demonstrated any effect in cytokine release reactions
 - Corticosteroids are the most effective drugs in the case of flushing or respiratory symptoms