Pros and Cons

Is allergy test for cephalosporin necessary in patients with penicillin allergy? - Yes It is.

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The safe use of cephalosporin in patients with penicillin allergy is a controversy that is old in the field of drug allergy but still has disagreement. Many researchers have found that the prevalence of cephalosporin allergy is lower than the prevalence of penicillin allergy. Furthermore, the prevalence of severe allergic reaction including anaphylaxis is very low when cephalosporin is administered without special allergy testing, even if there is a history of penicillin allergy. Based on the results of these researches, it is claimed that the use of cephalosporin is relatively safe.[1-2] However, it is unknown whether all the other physicians - except allergy specialist - not familiar with drug allergy agree. As an allergist, it is a natural obligation to help other field doctors who are unfamiliar about drug allergy to use cephalosporin safer.[3] In this debate, I will emphasize useful methods for safer cephalosporin use in patients with penicillin allergy.

To confirm the true risk of allergic reactions that can occur when using cephalosporin from penicillin allergy patients, we must fully understand the cross-reactivity of penicillin and cephalosporin. Penicillin and cephalosporin have identical or similar side chains. For example, amoxicillin has an identical side chain to cefadroxyl, cefrozil, and cefatrizine.[4] In the case of penicillin and cephalosporin having an identical side chain, cross reactivity is above 10% according to previous study.[5] Although other recent studies showed penicillin/cephalosporin cross-reactivity was 2-5%, US FDA recommend to describe cross-reactivity is up to 10% in cephalosporin drug labels. Such FDA's warning requests attention when administering cephalosporin from penicillin allergy patients and recommends allergic tests to improve safety in these patients.

Allergic tests that can be used are including history taking about drug allergy, skin test and test dosing. If you perform penicillin skin test before dosing cephalosporin, you can know the exact penicillin allergy state of the patient it can. If the skin test is negative, the patient is not in high risk and does not increase the incidence of adverse reactions caused by cephalosporin administration compared to patients without

penicillin allergy. If the skin test is positive, patients will have a risk of adverse reactions caused by cephalosporin administration by 2-5%. Therefore, the clinician will be able to make a decision by balancing the risk-benefit associated with cephalosporin administration. Penicillin skin test can apply relatively cheaply in clinical setting.[6] Observed graded challenges, or test doses of cephalosporin can apply safely in out-patients and in-patients suspected of IgE mediated reaction by penicillin.[7] The guidelines and/or algorithms used throughout the hospital are handy for teaching clinicians the basic way to approach penicillin allergy patients. Standardization is the key problem to improve. It is a good example to decide how to administer cephalosporin to patients of each other penicillin allergy using a history of drug allergy.[8]

Allergy testing methods, including drug allergy history taking, skin test and graded challenge make cephalosporin safer to use in patients with penicillin allergy. Through implementation of this methods, the interest and concern of the patient must be reflected sufficiently, and the concern of medical personnel should be strongly protected.

References

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