

# Antihistamine, common drugs safely treat allergy-like contrast reactions

August 13, 2008

Patients who have had acute allergic-like reactions to nonionic iodinated contrast material rarely develop serious long-term problems and can be treated safely with commonly used medications, according to a study conducted by researchers at the University of Michigan Hospitals in Ann Arbor. Adverse reactions to iodinated contrast agents are rare. Occasionally, however, physicians who administer contrast media to patients may run into these allergy-like reactions, and some will require treatment, said coauthor Dr. Richard H. Cohan.

Cohan and colleagues retrospectively reviewed institutional records of all nonionic iodinated agents used for contrast-enhanced CT exams from January 1999 to December 2005. They sought to determine how often reactions occurred, how often they had to be treated, and what happened to patients who underwent treatment.

The researchers found that of the 84,928 adult patients who received IV contrast media, only 545 (0.6%) had allergic-like reactions, 221 of whom were treated mostly with antihistamines and other common medications. Overall, 99% of the allergic-like reactions resolved within 24 hours without long-term side effects. The investigators published the study in the August issue of the American Journal of Roentgenology (2008;191:409-415).

Of the 545 affected patients, 418 had mild allergy-like reactions, while 116 and 11 suffered moderate or severe reactions, respectively. Most patients were treated with diphenhydramine (145), followed by corticosteroids (17), albuterol (16), epinephrine (15), and nitroglycerin (8).

“Commonly used medications can be administered safely,” Cohan said. “However, treatment errors are not uncommon and in a few instances can lead to patient morbidity.”

Cohan and colleagues found a number of cases in which nonrecommended treatment was provided:

- administration of oxygen by nasal cannula instead of mask and at lower than recommended doses
- overutilization of diphenhydramine, particularly in hypotensive patients
- erroneous dose, concentration, and administration form (subcutaneous versus intravenous) of epinephrine.

The most striking example of patient morbidity from nonrecommended treatment occurred in two patients who received doses of 1 mg of epinephrine in the absence of cardiopulmonary arrest and had cardiac complications. These complications were mild and transient, however, and caused no serious morbidity.

Radiologists, nurses, and technologists should review the algorithms for treating contrast reactions on a regular basis, he said.

“In fact, we would suggest that such a review should probably occur at least twice a year,” Cohan said. “However, it is also consoling to know that even when patients have moderate or severe contrast reactions, the vast majority recover promptly and without any long-term complications.”

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