

FIVE THINGS TO KNOW ABOUT ...

Allergic-type reactions to radiographic contrast media

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Two main types of adverse events can occur

1 Either allergic-type reactions or contrast-induced nephropathy may occur after administration of radiographic contrast media. These are entirely different entities with distinct pathophysiologies.

“Iodine allergy” is not a risk factor for allergic-type contrast reactions

2 Predisposing risk factors for immediate allergic-type reactions include a previous adverse reaction, atopy, asthma, dehydration, heart disease, existing renal disease, hematologic disease (e.g., sickle-cell anemia), age less than 1 year or more than 65 years, and use of β -blockers or non-steroidal anti-inflammatory drugs. Allergy or sensitivity to seafood is not associated with an increased risk of allergic-type contrast reactions.³

Consider premedication

3 In patients who have had a previous allergic-type reaction to contrast media, premedication may be helpful. One example of a premedication protocol is to administer 50 mg of prednisone orally 13, 7 and 1 hour(s) before injection of the contrast medium, and 50 mg of diphenhydramine intravenously, intramuscularly or orally 7 and 1 hour(s) before injection.^{4,5}

Allergic-type reactions can be immediate or delayed

4 Immediate reactions take place within an hour after injection of the contrast medium. These reactions can be mild (nausea, vomiting, mild urticaria, pallor), moderate (severe vomiting, extensive urticaria, dyspnea, rigor, laryngeal edema) or severe (pulmonary edema, cardiac arrhythmias or arrest, circulatory collapse). The incidence of immediate reactions to nonionic contrast media ranges from 0.01%–0.04% (severe) to 3% (mild).¹ Nonionic agents are associated with a decreased risk of adverse reactions.²

5 Delayed reactions, occurring hours to weeks after injection of the contrast medium, are usually self-limiting and cutaneous (rash, erythema, urticaria, angioedema). They may be accompanied by fever.

Consider alternative imaging tests

6 In patients who have a history of moderate to severe allergic-type reactions to contrast media, alternative imaging tests may provide similar information without the risks. Other options include computed tomography without contrast medium, ultrasonography, magnetic resonance imaging and nuclear imaging.

7 If contrast-enhanced imaging is required, the referring physician should discuss the risks and benefits with the patient. The radiologist may also have a role in such discussions.

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