



## PIC QUESTION OF THE WEEK: 11/21/05

Q: Is there a risk in using amiodarone in patients with *iodine hypersensitivity*?

A: Amiodarone is a popular drug for the treatment of supraventricular and ventricular arrhythmias. Each 200 mg tablet contains 75 mg (37.3%) of iodine. The product literature includes a contraindication to its use in patients with hypersensitivity to iodine. The question arises, what is *iodine hypersensitivity*? Patients who report allergies to shellfish or contrast media do not possess true sensitivity to iodine. Allergic reactions to shellfish are usually the result of hypersensitivity to tropomyosin, a protein found in the muscle tissue of shellfish and mollusks. Allergic-like reactions caused by contrast media are generally due to the high osmolality or ionic nature of the dye. Most of these reactions can be prevented by using a low-osmolality and/or non-ionic compound. When a patient presents with a stated iodine allergy, further investigation into the nature of the reaction is suggested. Iodine hypersensitivity is difficult to define and not well documented in the literature. Iododerma is a dermatologic condition characterized by skin eruptions, sometimes described as vegetating or ulcerative masses, often noted on the neck, extremities, and trunk. The condition is usually associated with excessive doses of iodine. A recent publication describes three patients with a history of *iodine hypersensitivity* who were subsequently challenged with amiodarone. Two of the cases involved histories of reactions to contrast media while the third patient had experienced shellfish sensitivity. There was little data in the patient histories describing the individual reactions. These three patients were administered amiodarone for chemical cardioversion of various arrhythmias. There were no adverse events considered secondary to the iodine present in the drug. It has been reported that as many as 80% of patients experience adverse reactions with amiodarone, but the associated dermatological reactions (rash, blue-gray pigmentation, and photosensitivity) are not caused by iodine. One author has suggested that the contraindication for using amiodarone in patients with iodine allergy has generally been disregarded. Evidence for avoiding amiodarone in patients with *iodine hypersensitivity* is extremely limited and does not appear to support its contraindication in patients with severe arrhythmias.

### References:

- Brouse S, Phillips S. Amiodarone use in patients with documented allergy to iodine-containing compounds. *Pharmacotherapy* 2005;25:429-34.
- Allergy and Asthma Management Center: Ask the Expert: Drug Reaction. <http://www.aaaai.org/aadmc/ate/drugreaction.html> (accessed 2005 Nov 16).

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