



Sunset over the Pacific

PIC QUESTION OF THE WEEK: 2/20/12

Q: Can a patient with an allergic reaction to one PPI be re-challenged with another drug in the same category?

A: Cross-reactivity among the proton-pump inhibitors (PPIs) has been documented in several case reports. With the exception of lansoprazole, the product labeling for each of these agents describes them as *contraindicated* in patients with known hypersensitivity to PPIs or *other substituted benzimidazoles*. The product literature for lansoprazole indicates it should be used with *caution* in patients with hypersensitivity to PPIs. Although rare, these cases of cross-reactivity can be serious. The majority of reports involve patients experiencing anaphylaxis or angioedema when re-challenged with an alternative PPI. In one of the older reports, two patients developed classic signs and symptoms of anaphylaxis within 45 minutes after receiving single doses of lansoprazole. Each had a documented history of a severe reaction to omeprazole. Evidence suggested these immediate-type reactions were mediated by IgE. An additional case described a patient who developed a lichenoid eruption to omeprazole. He had similar reactions when subsequently re-challenged with lansoprazole and pantoprazole (administered inadvertently). A relatively recent report has provided additional information on this topic. The study was conducted in patients with a history of urticaria, angioedema, or hypotension after exposure to omeprazole. Patients were subsequently skin tested (prick and intradermal testing) with omeprazole, lansoprazole, and pantoprazole. The skin tests were positive for each of these PPIs. Recent literature suggests that there may be a potential pattern of hypersensitivity between specific agents in this class. Two studies of similar design were done in replicate. In the studies, 5 patients with a known reaction to omeprazole were skin tested with omeprazole, esomeprazole, pantoprazole, lansoprazole, and rabeprazole. These trials evidenced an association of lansoprazole and rabeprazole in triggering a hypersensitivity reaction in certain patients while those same individuals remained tolerant to agents such as omeprazole, esomeprazole, and pantoprazole and vice versa. It has been the primary understanding that hypersensitivity reactions were caused by the benzimidazole scaffold of the agents. New evidence has linked cross-reactivity among agents to side chain similarities. This explains the association between lansoprazole and rabeprazole causing hypersensitivity reactions seen in the studies. Based on the available literature, it would not seem prudent to re-challenge a patient with any PPI, especially if they have had a significant reaction to one in the past. Rather intradermal skin tests should be performed with representative agents (lansoprazole and omeprazole) to determine the exact nature of the hypersensitivity.

References:

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The PIC Question of the Week is a publication of the Pharmaceutical Information Center, Mylan School of Pharmacy, Duquesne University, Pittsburgh, PA 15282 (412.396.4600).