



"Mardi Gras Masks"



DUQUESNE
UNIVERSITY

MYLAN SCHOOL OF PHARMACY

PIC QUESTION OF THE WEEK: 2/23/09

Q: Why does a cautionary statement appear in a pharmacy computer system when dispensing ferrous gluconate tablets to a patient with a *salicylate allergy*?

A: Some ferrous gluconate tablets (e.g. Fergon and others) contain tartrazine (FD&C Yellow No. 5), an azo dye that had been widely used in pharmaceutical products until the late 1970s. The first report of an allergic reaction to a product containing tartrazine was published in 1959 and evidence began to accumulate that the dye was the cause of a number of allergic reactions from both drugs and foods. While several reports included patients with a history of aspirin intolerance, a number of cases occurred without evidence of aspirin sensitivity. In 1980, the FDA established guidelines for the labeling of over-the-counter and prescription drugs containing tartrazine. The labeling is required to identify the presence of tartrazine in the product as well as its association with possible adverse reactions in patients with allergic or pseudoallergic reactions to aspirin. It has been suggested that the incidence of bronchospasm in patients with asthma may approach 20%. In addition, the classic syndrome known as the *aspirin triad* (aspirin sensitivity, asthma, and rhinitis/nasal polyps) could be exacerbated by exposure to tartrazine. Recognition of the possible association between tartrazine and allergic reactions thus prompted many manufacturers to discontinue use of the dye in their products. It should be noted, however, that several pharmaceuticals still contain tartrazine and should be used cautiously, if at all, in patients with aspirin sensitivity. These include some formulations of ferrous gluconate, clarithromycin, clindamycin, dextroamphetamine, etc. The risk of an allergic reaction to tartrazine in aspirin-sensitive individuals is low and, several years ago, estimated to be ~3%. A study published in 1986 evaluated the frequency of bronchospasm in 190 patients with a history of aspirin allergy who were challenged with tartrazine. None developed asthma symptoms after challenge with tartrazine in doses of up to 50 mg! Today, many authors question the true degree of cross-reactivity between tartrazine and aspirin. Nonetheless, this precaution should still be considered when using tartrazine-containing products in patients with aspirin intolerance, including those with characteristics of the aspirin triad.

References:

- Beausoleil JL, Fiedler J, Spergel JM. Food intolerance and childhood asthma: what is the link? *Pediatr Drugs* 2007;9:157-63.
- Facts & Comparisons 4.0. Wolters Kluwer Health, Inc. Accessed February 12, 2009.
- Jenkins C, Costello J, Hodge L. Systematic review of prevalence of aspirin induced asthma and its implications for clinical practice. *BMJ* 2004;328:434.
<http://www.bmj.com.authenticate.library.duq.edu/cgi/reprint/328/7437/434>. Accessed February 19, 2009.

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