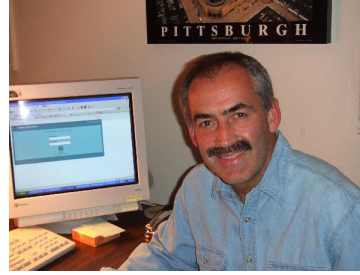


Clinicians Corner



By Dr. Ray Stierer, Pharm D

Flu Vaccine & Coumadin- November 2007

It's that time of year again, flu season. Many of our patients will receive a flu vaccine. There is conflicting information as to whether or not an interaction occurs with warfarin. Studies vary from no effect^{1,2}, to an increase in the INR³ or decrease in INR⁴. These early studies were done in a small number of patients and prior to laboratory standardization of reporting prothrombin times as INRs. This interaction is also listed in the influenza package insert, and implies that warfarin levels may increase, but that this interaction is of little consequence. The insert states, "Although influenza vaccination can inhibit the clearance of warfarin, theophyllin, phenytoin, and aminopyrine therapy, studies have failed to show any adverse clinical effects attributable to these drugs in patients receiving influenza vaccine."⁵

In 2002, Poli et al⁶ did the first large study in 73 anticoagulated patients who had received the influenza vaccine. Patients were followed for at least 3 months before and 3 months after vaccine administration. Patients were compared to a control group of 73 anticoagulated patients who did not receive the vaccine. Overall, they found no difference in the overall time spent within, above or below the therapeutic range over the 6 month period. However, for patients over 70 years of age (46.5% of the total number of patients), they observed a statistically significant DECREASE in anticoagulation intensity during the first month after vaccination and persisted for up to 3 months after vaccination. These patients spent a prolonged time below the therapeutic range, 10% before vaccination compared to 27% after, $p = .001$. This effect was not detectable after 6 months. Although not statistically significant, 27% of the vaccinated patients > 70 required a > 10% increase in warfarin dosage, versus 16% in the controls > 70.

Despite conflicting data in the literature, the Poli study suggests the need for more frequent INR monitoring in elderly patients during the first few months following influenza vaccination. It appears that the INR may decrease in patients who are over 70 years of age.

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4. Bussey HI, Saklad JJ. Effect of influenza vaccine on warfarin therapy. *Drug Intell Clin Pharm* 1988;22:198-201.
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