Anti-TNF Therapies Exert Slight Effect on Flu Vaccine

BY ROBERT FINN
San Francisco Bureau

Patients taking anti–tumor necrosis factor–α medications show somewhat impaired antibody response to influenza vaccination, but there is no decrease in the proportion of patients achieving a protective titer, according to the results of a recent study.

The study, by Dr. L.B.S. Gelinck of Leiden (the Netherlands) University Medical Center and colleagues, compared immunologic responses to the influenza vaccine in 64 patients taking anti–tumor necrosis factor–α (anti-TNF-α) medications for various autoimmune diseases with 48 patients with autoimmune diseases who were not taking those drugs. There were 18 healthy controls.

All three groups achieved about an 80% rate of protection to each of the three components of the vaccine (Ann. Rheum. Dis. 2007;[doi:10.1136/ard.2007.077552]).

Guidelines issued by the Centers for Disease Control and Prevention recommend annual vaccination for patients at risk of complications of influenza, including those who are treated with anti-TNF-α agents such as infliximab, etanercept, and adalimumab. On the other hand, findings from earlier studies on the effect of influenza vaccination on these patients were conflicting.

CDC recommends the vaccination of those at risk of influenza complications, including patients treated with infliximab, etanercept, and adalimumab.

Patients with several autoimmune diseases were represented in the study, including those with gastroenterologic disease, rheumatoid arthritis, juvenile chronic arthritis, psoriatic arthritis, spondyloarthropathy, and inflammatory bowel disease. Their mean age was 49 years (range 18-85 years). Patients in the anti-TNF group had been using the agents for an average of 24 months, with a range of 0.5-78 months.

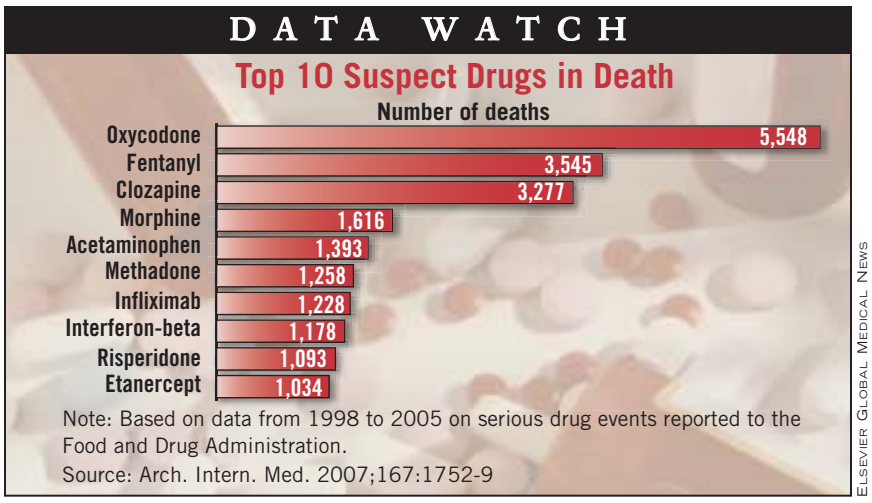
All study participants were vaccinated in the fall or winter of 2003 with a commercially available trivalent subunit influenza vaccine. Four weeks after vaccination, patients taking an anti-TNF-α agent had significantly lower geometric mean titers to two out of the three vaccine components, compared with patients not taking an anti-TNF-α agent and with healthy controls.

Nevertheless, more than 80% of the patients in each of the three groups achieved titers high enough to protect them against infection; there were no significant differences among the groups on this measure.

When tested separately, infliximab, etanercept, and adalimumab all had similar effects on the patients' response to vaccination.

None of the patients reported major side effects, and none experienced any deterioration in an underlying condition that was attributed to the influenza vaccine. About 20% of the patients in all groups reported minor side effects following immunization, such as local pain or tenderness at the vaccine injection site, but there were no significant differences among the groups. Similarly, about 14% of all patients experienced systemic reactions such as fever, myalgia, or headache during the 4 weeks after vaccination. ■

DATA WATCH



Note: Based on data from 1998 to 2005 on serious drug events reported to the Food and Drug Administration.
Source: Arch. Intern. Med. 2007;167:1752-9

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