Flu Treatment for Upcoming Season Clarified

BY BRUCE JANCIN

VAIL, COLO. — The recommended antiviral therapy during the coming influenza season will depend on whether a patient has laboratory-confirmed novel influenza A(H1N1).

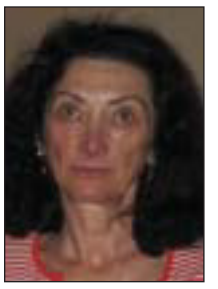
In patients with confirmed novel influenza A(H1N1), or in patients with laboratory-confirmed influenza A(H3N2) or B, the first-line antiviral is oseltamivir (Tamiflu). However, in patients with a positive laboratory test for influenza A or seasonal A(H1N1), the preferred agent is zanamivir (Relenza), according to Centers for Disease Control and Prevention recommendations based on antiviral resistance patterns.

Zanamivir is also the first-line agent in patients who are suspected of having influenza on clinical grounds but who did not have laboratory tests or had negative results, Dr. Adriana Weinberg explained at a conference on pediatric infectious diseases sponsored by the Children's Hospital in Denver.

Novel H1N1, A(H3N2), and B viruses share the same antiviral susceptibility pattern—all are susceptible to both zanamivir and oseltamivir. However, oseltamivir is preferred because as an oral agent it is easier to administer than the inhalation powder zanamivir, has fewer side effects, and is approved for use across a wider age range, added Dr. Weinberg, professor of pediatrics and medicine and medical director of the clinical virology laboratory at the University of Colorado Hospital, Aurora.

The recommended alternative to zanamivir in patients with laboratory evidence of influenza A, a negative test result, or no testing is the combination of oseltamivir plus rimantadine (Flumadine). For patients who are positive for seasonal influenza A(H1N1), the fallback antiviral regimen is rimantadine alone.

Alternatives to the inhalation-only zanamivir are important because that administration route is problematic in patients who are intubated or have asthma



A big concern is that the novel H1N1 virus will become resistant to oseltamivir, as did seasonal A(H1N1).

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or other airway disease. Plus, zanamivir isn't approved for use in children younger than age 7 years, she noted.

In contrast, in April the Food and Drug Administration approved a 1-year Emergency Use Authorization for the use of oseltamivir for treatment and prophylaxis in infants.

A big concern, according to Dr. Weinberg, is that the novel H1N1 virus will become resistant to oseltamivir, as did seasonal A(H1N1). This could occur if the novel H1N1 in a patient coinfected with seasonal A(H1N1)—a not-uncommon scenario—acquired the oseltamivir-resistance mutation.

To date three cases of oseltamivir-resistant novel H1N1 have been reported to the World Health Organization. But in addition to the emergence of resistance, there is also a phenomenon known as regression of resistance, which works in favor of public health.

Numerous investigational antiviral agents are well along in clinical trials. One that could prove particularly valuable is an intravenous formulation of zanamivir, a drug still active against all strains of influenza. Another promising drug is peramivir, a neuraminidase inhibitor that appears to be effective and well tolerated.

"Peramivir has the same resistance pattern as oseltamivir. Its big advantage is it can be administered parenterally. That's going to be really important in patients with severe influenza, in whom oral drugs aren't going to be reliable," Dr. Weinberg noted.

Ribavirin and several interferons commercially available for other indications are known to have some activity against influenza. In severe influenza that's not responding to treatment, combination therapy with neuraminidase inhibitors, adamantanes, interferon, and ribavirin is appropriate, Dr. Weinberg said. ■