A Single Dose of Adjuvant H1N1 Vaccine May Be OK

BY HEIDI SPLETE

A single dose of a 7.5-mcg adjuvant vaccine met immunogenicity criteria for protection against the 2009 H1N1 influenza in children aged 3-8 years, based on preliminary data from 390 children in one study.

"The use of adjuvant may provide a rapid immune response at a lower hemagglutinin dose than that required in vaccine without adjuvant," said Dr. Adriano Arguedas of the Instituto de Atención Pediátrica in San José, Costa Rica, and associates.

They conducted a randomized trial of three dosing regimens of H1N1 vaccines in individuals aged 3-64 years, including 194 children aged 3-8 years and 196 children aged 9-17 years.

The children were randomized to receive one 7.5-mcg hemagglutinin dose with adjuvant, one 15-mcg hemagglutinin dose without adjuvant, or two 15-mcg hemagglutinin doses without adjuvant (N. Engl. J. Med. 2009 Dec. 30 [doi: 10.1056/NEJMc0909988]).

At 22 days after vaccination, hemagglutinin-inhibition (HI) titers had increased in both age groups for all three vaccine regimens.

After a single dose of each vaccine, children aged 9-17 years met the Food and Drug Administration's Center for Biologics Evaluation and Research (CBER) criteria for immunogenicity, but "in children 3-8 years of age, only the 7.5-mcg dose of 2009 H1N1 vaccine with adjuvant met both the immunogenicity criteria after one dose," Dr. Arguedas and colleagues wrote.

'In children 3-8 years of age, only the 7.5-mcg dose of 2009 H1N1 vaccine with adjuvant met both the immunogenicity criteria after one dose.'

Neither one nor two 15-mcg doses of unadjuvanted vaccine met the immunogenicity criteria in this younger age group.

According to the CBER criteria, immunogenicity is reached when the lower bound of the two-sided 95% confidence interval was at least 40% in individuals who showed seroconversion on HI assays, and when the lower bound of the two-sided 95% confidence interval was at least 70% in individuals with an HI antibody titer of at least 1:40.

No serious adverse events related to the vaccine were reported in any of the age groups.

The study is ongoing, but the results suggest that use of an adjuvant vaccine could accelerate the process of vaccinating young children (a high-risk group) against H1N1 influenza, the researchers said. ■

VITALS

Main Finding: One dose of adjuvant vaccine may protect young children against 2009 H1N1 influenza.

Data Source: A randomized trial of three dosing regimens of H1N1 vaccines, including 194 children aged 3-8 years.

Disclosures: The study was sponsored by Novartis, which manufactured the vaccines used. Study coauthor Dr. Kelly Lindert is an employee of Novartis Vaccines and Diagnostics in Cambridge, Mass.

Pediatric H1N1 Vaccine Lots Being Recalled Voluntarily

The Centers for Disease Control and Prevention has announced a voluntary recall of certain lots of the Sanofi Pasteur H1N1 pediatric vaccine in prefilled syringes shipped in November 2009. Approximately 800,000 vaccine doses in these lots are affected.

According to a statement issued by the CDC, Sanofi Pasteur Inc. distributed certain lots that contain antigen content below the specified limit for the product. The statement emphasized "that the small decrease in antigen content is unlikely to result in a clinically significant reduction in immune response among persons who have received the vaccine. For this reason there is no need to revaccinate persons who have received vaccine from these lots."

The lots of concern, intended for children aged 6-35 months, are 0.25-mL prefilled syringes, 10-packs (NDC #49281-650-25, sometimes coded as 49281-0650-25): UT023DA, UT028DA, and UT028CB, as well as 0.25-mL prefilled syringes, 25-packs (NDC #49281-650-70, sometimes coded as 49281-0650-70): UT030CA.

Clinicians will receive instructions from Sanofi Pasteur regarding how to return unused vaccine from these lots, the statement said.

For more information about the recall, visit: www.cdc.gov/h1n1flu/vaccination/syringes_qa.htm.

—Doug Brunk

H1N1 Reinfection Reported After Oseltamivir Tx in Chile

BY HEIDI SPLETE

Three Chilean patients had confirmed reinfection with the 2009 pandemic influenza A (H1N1) virus after successful treatment with oseltamivir, according to a letter published in the January 2010 issue of Emerging Infectious Diseases.

"Reinfection is rarely seen in nonpandemic influenza A," said Dr. Carlos M. Perez of Pontificia Universidad Catolica de Chile (Santiago) and colleagues.

The first patient was a healthy 14-year-old girl who had a fever, sore throat, and nasal congestion when H1N1 infection was confirmed by polymerase chain reaction (PCR) testing. She was treated with oseltamivir, and her symptoms resolved after 2 days.

"Twenty days later, fever, muscle aches, and vomiting developed in the patient," the researchers said. The patient was treated with amantadine, and she recovered. Subsequent PCR testing confirmed reinfection with pandemic influenza (EID 2010;16:156-7).

The second patient was a 62-year-old woman who developed a high fever, cough, and nasal congestion while she was hospitalized prior to surgery. PCR testing and viral culture confirmed infection with the pandemic H1N1 virus. She received oseltamivir starting 5 days after the onset of symptoms, and the symptoms resolved within the next 5 days.

Two weeks later, while she was still hospitalized, the patient again developed fever, bronchial obstruction, and productive cough; PCR testing again was positive for pandemic H1N1. "The patient was again treated with oseltamivir, and PCR results were negative for influenza after 48 hours of antiviral treatment," the researchers said.

The third patient was a previously healthy 38-year-old man hospitalized for mitral and aortic valve replacement following acute endocarditis caused by *Staphylococcus aureus*. The patient developed a sore throat, nasal congestion, cough, and a low-grade fever 11 days after surgery, while he was still hospitalized.

PCR testing confirmed pandemic H1N1 infection, and the patient was treated with oseltamivir. His respiratory symptoms resolved after 5 days. "He was discharged from the hospital, but readmitted 18 days later with nasal congestion, cough, and high fever," the researchers said. Repeat testing again was positive for pandemic flu; he was successfully retreated with oseltamivir.

H1N1 reinfection in these patients could be due to the high rate of infection in the community at the time, as well as the immunocompromised status of the second and third patients, the researchers noted. The occurrence of two reinfections in hospitalized patients raises the possibility of nosocomial transmission, they added, but more information is needed. ■

Disclosures: *None was reported.*

Federal Advisory Panel Finds No Safety Signal With Vaccine

BY MIRIAM E. TUCKER

The National Vaccine Advisory Committee has endorsed a working group report concluding that no safety signals have been identified so far with the 2009 H1N1 influenza vaccine.

In a public teleconference, working group chair Dr. Marie McCormick said the group reviewed data for a total of 74 million doses of inactivated (injected) vaccine and 19 million doses of live attenuated (intranasal) H1N1 vaccine distributed as of around Christmastime.

They concluded that the data do not suggest a safety signal between the outcomes examined and the vaccine, defining "signal" as an outcome temporally occurring more than anticipated by chance alone.

No serious increases in adverse events have been observed to date in any of the pandemic H1N1 vaccine clinical trials, and a comparison of serious events reported to the Vaccine Adverse Events Reporting System have shown similar levels between the H1N1vaccine and the seasonal influenza vaccine, as well as other vaccines.

In addition, active surveillance systems that are using rapid-cycle analysis of prespecified outcomes have also been within expected values, said Dr. McCormick, the Sumner and Esther Feldberg professor of Maternal and Child Health at Harvard University, Boston.

However, she cautioned, the size of the population captured under active surveillance is still somewhat limited, and some of the prespecified event analyses have involved small numbers.

A new federal project called Post-Licensure Rapid Immunization Safety Monitoring (PRISM), designed to monitor H1N1 vaccine safety in real-time using data from large health plans covering approximately 10% of the U.S. population, was set to begin in the next few days.

"As more data are available through active surveillance, conclusions will be based on a larger accumulation of data. Larger samples may be needed to detect rare adverse events," she said.

The NVAC members voted to endorse the report during the teleconference. It now goes to the U.S. assistant secretary for health, who will review and consider it for formal implementation. ■