FluMist Found Beneficial for Asthmatic Patients

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Young children with asthma or a history of respiratory tract infections may have an alternative to the standard influenza shot, according to findings of two recent studies.

The only vaccine currently approved for use in children is the injectable trivalent inactivated influenza vaccine (TIV). Two new studies suggest that the live attenuated influenza vaccine (LAIV, FluMist; MedImmune)—administered nasally—may be a second viable option, according to the investigators. The two studies aimed to compare the safety and efficacy of CAIV-T, an investigational refrigerator-stable form of LAIV, with TIV during one flu season in children with asthma and respiratory infections, respectively.

For children with asthma or other respiratory infections, influenza can exacerbate their conditions. Despite this potential for increased illness, however, according to one study, 75%-90% of children with asthma do not receive the recommended annual influenza vaccine (Pediatr. Infect. Dis. J. 2006;25:860-9).

In the asthma study, 2,229 children and adolescents with asthma aged 6-17 years participated and were divided into two treatment groups—1,114 to be administered one intranasal dose of CAIV-T and 1,115 to receive an intramuscular injection of TIV. The study was conducted during the flu season spanning Oct. 4, 2002, to May 31, 2003.

During the study, all of the participants underwent a screening period before the vaccination and 15 days afterward. During this time, the parents/guardians recorded the children's daily asthma symptoms.

The parents/guardians also kept a diary until May 31, 2003, to record any adverse reactions requiring medication or health care provider visits or reactogenicity events such as fever, vomiting, and headache.

At the end of the observation period, the authors found no significant difference between the CAIV-T and TIV groups in asthma exacerbation after the vaccinations, and the incidence of confirmed influenza illness was 4.1% in the CAIV-T group, compared with 6.2% in the TIV group.

According to lead author Dr. Douglas M. Fleming and his colleagues in the CAIV-T Asthma Study Group, CAIV-T had a "significantly greater relative efficacy of 35%, compared with TIV, in this high-risk population."

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Researchers in the CAIV-T Study Group, based in Birmingham, England, found quite similar results in how young children with recurrent respiratory tract infections, including common colds, bronchitis, and pneumonia, responded to the nasal influenza vaccine (Pediatr. Infect. Dis. J. 2006;25:870-9).

Dr. Shai Ashkenazi and colleagues studied 2,085 children between the ages of 6 and 71 months and divided participants into CAIV-T and TIV groups. Each group was given two doses of either vaccine about 35 days apart. Surveillance time and reporting of adverse reactions or reactogenicity events was done in similar fashion to the asthma study.

The authors found there were fewer episodes of influenza in the CAIV-T group (2.3%) than the TIV (4.8%), and concluded that CAIV-T provided "superior protection against the influenza strains," with an overall efficacy of 53%. The results of both studies confirm what health care providers have experienced in the past.

"These results are not surprising at all," Dr. W. Paul Glezin, professor of pediatrics at the Baylor College of Medicine in Houston, said in an interview. "We have been testing LAIV for more than 20 years [at Baylor] and have gotten better influenza protection in young children from LAIV."

Dr. Glezin added that he has found the immunity of the intranasal vaccine often lasts through a second flu season, unlike that of the influenza injection. Health care providers also are aware of the negative perception the injection has with young patients. "What young children often react to most is getting a shot," he said. "It's much easier to give the nasal spray to young children than the intramuscular vaccine." ■