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Effectiveness of herpes zoster vaccine on recurrent herpes zoster among an immunocompetent elderly population

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Background: Since 2006 when the zoster vaccine was first licensed, one of the most commonly asked questions by patients and clinicians has been "Should a patient with a history of herpes zoster (HZ) receive the vaccine to prevent another episode?". The benefit of vaccinating immunocompetent patients who have had shingles has not been examined. The study assessed the association between vaccination and the incidence of herpes zoster recurrence among persons with a recent episode of clinically diagnosed herpes zoster.

Methods: This is a matched cohort study in Kaiser Permanente Southern California. Study populations were immunocompetent elderly ≥ 60 years old with a recent episode of herpes zoster. Potential recurrent HZ cases were identified electronically by ICD-9 code of 053.xx from outpatient, emergency, and inpatient files. Medical records of electronically identified cases were retrieved and reviewed masked to vaccination status by an infectious disease specialist using pre-specified review criteria. Incidence of recurrent herpes zoster was compared between the vaccinated and the unvaccinated matched cohorts. The hazard ratio associated with vaccination was adjusted for a propensity score that accounted for potential confounders.

Results: There were total 1,036 vaccinated and 5,180 unvaccinated members included. Based on the clinically confirmed cases, the incidence of recurrent HZ among age <70 cohort was 0.99 (95% CI, 0.02-5.54) and 2.20 (95% CI, 1.10-3.93) per 1,000 person-years in the vaccinated and the unvaccinated cohort, respectively. The adjusted hazard ratio comparing the vaccinated and the unvaccinated population was 0.39 (95% CI, 0.05- 4.45). It was 1.05 (95% CI, 0.30-3.69) among the age ≥70 cohorts.

Conclusion: The short term risk of HZ recurrence following a recent initial episode is fairly low among immunocompetent adults, regardless of vaccination status. While there was a trend towards lower rates in individuals vaccinated with zoster vaccine, especially in those younger than 70 years old, the rarity of outcome limited our ability to make definitive statements about the effect of vaccination. Regardless, such a low risk suggests that one should evaluate the necessity of immediately vaccinating immunocompetent patients with a recent HZ episode, especially given the periodic shortages of zoster vaccine.

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Cross subclade immunity after one-year booster immunization with MF59®-adjuvanted A/H5N1 influenza vaccine in 6 month to 17 year-old children

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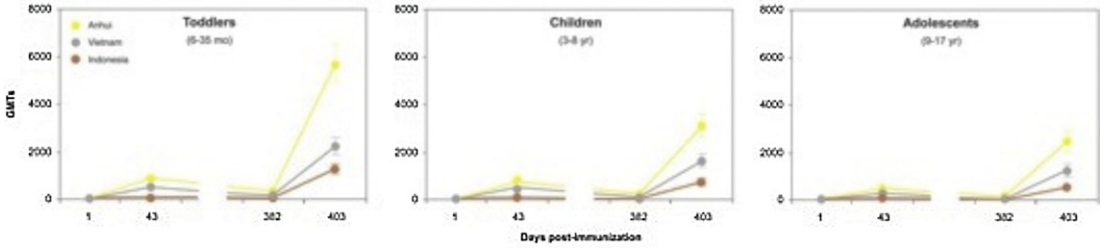
Background: Ongoing A/H5N1 viral transmission in SouthEast Asia poses a pandemic threat. Effective vaccines must provide cross-reactive antibody responses to a future exposure as the virus is evolving. We report responses to a booster does of MF59®-adjuvanted A/H5N1 vaccine (Aflunov®, Novartis Vaccines) in children who were primed one year earlier.

Methods: In this randomized, observer-blind study, conducted at the University of Tampere Medical School, Finland, cohorts of healthy children aged 6-35 months (n = 117), 3-8 years (n = 84), and 9-17 years (n = 82) received vaccine containing 7.5 μg of A/H5N1/Vietnam/1194/2004 (clade 1) influenza antigen and a standard dose of MF59 oil-in-water adjuvant in a two-dose priming series and, one year later, as a single booster dose. Cross-reactive antibody responses against heterologous A/H5N1 strains, A/Anhui/1/2005 (subclade 2.3.4) and A/Indonesia/5/2005 (subclade 2.1.3.2) were analysed by microneutralization assay (MN) three weeks (Day 43) and one year (Day 382) after primary immunization, and three weeks after booster vaccination (Day 403).



Results: 99-100% of subjects achived MN titers ≥ 80 to all three strains after booster vaccination. Pre-booster anbd booster dose geometric mean titers (GMT) were inversely related to age, with the highest titers seen in 6-35 month-olds. GMT responses were higher to the heterologous Anhui 2.3.4 subclade virus than to the homologous Vietnam subclade 1.1 virus.

Conclusion: Booster immunization with MF59-adjuvanted A/H5N1 vaccine one year after priming led to putatively protective levels of MN antibodies to both homologous and heterologous viruses. Pre-pandemic priming with MF59-adjuvanted A/H5N1 vaccine could facilitate an emergency public health program, with a single dose of antigen-sparing vaccine providing a broadly reactive response.

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