Experimental vaccine reduces morbidity from shingles and post-herpetic neuralgia

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AN experimental vaccine against the herpes zoster virus appears to reduce illness from herpes zoster (shingles) and postherpetic neuralgia, a recent study finds.

"It would be very helpful to have a vaccine for reducing the burden of illness from herpes zoster," said Vincent de Luise MD, Yale University School of Medicine, New Haven Connecticut, US, in an interview with *Euro Times*.

That burden includes herpes zoster ophthalmicus (HZO), the most common ocular complication of herpes zoster—although Dr de Luise emphasised that the study did not specifically address this complication.

The Shingles Prevention Study included 38,546 healthy adults aged 60 or older who had a history of varicella or had lived in the continental United States for at least 30 years. Participants were randomised to receive either a live attenuated varicella-zoster vaccine or a placebo. The vaccine contained at least 18,700 plaque-forming units of virus per dose, which is approximately 14 times stronger than the FDA-approved vaccine for preventing varicella.

The researchers measured the pain and discomfort due to herpes zoster by asking people who developed the disease to rate their pain daily for six months on a scale of 0 to 10. They developed a herpes zoster burden-of-illness score by adding together all the scores, and dividing the number by the total number of people in the treatment group. The researchers defined post-herpetic neuralgia as pain commencing or continuing after the first four weeks after the cutaneous eruption, of 3 or more on a scale of 1 to 10 that persisted or appeared more than 90 days after the onset of a rash.

Vaccine halves incidence of Herpes Zoster

More than 95% of participants completed the study, with follow-up lasting for 3.12 years or longer in half of the patients. The zoster vaccine reduced the incidence of herpes zoster by 51.3% compared with placebo, reduced the incidence of post-herpetic neuralgia by 66.5%, and reduced the herpes zoster burden-of-illness score by 61.1%.

The investigators identified serious side effects in five participants, but only two of these participants were in the vaccine group. The rate of serious side effects or deaths was the same in both the vaccine and placebo groups (1.4%).

A subgroup of 6000 study participants recorded all side effects for 42 days. The most frequent side effects were injection-site reactions such as erythema, pain or tenderness, swelling, and pruritis, which were more common among those in the vaccine group than in the placebo group (48.3% vs. 16.6%). In addition, a larger percentage of people in the vaccine group experienced overall side effects (58.1% vs. 34.4%) and serious side effects (1.9% vs. 1.3%) compared with the placebo group.

The study authors concluded that vaccination of people aged 60 and older with healthy immune systems is an effective way to reduce morbidity associated with herpes zoster and post-herpetic neuralgia. However, they do not recommend using the currently available varicella vaccine in an effort to protect against herpes zoster and post-herpetic neuralgia.

Further studies needed

Donald H. Gilden MD from the University of Colorado Health Sciences Centre in Denver, who commented on the study in an editorial, proposed that because herpes zoster and its complications are "common and serious, it seems prudent to market the zoster vaccine."

However, he wrote that marketing should occur "only if a large number of those vaccinated are followed closely, particularly those over 85 years of age," to monitor effectiveness and possible risk.

Dr de Luise emphasised that if the vaccine proves to be effective and is approved by the US FDA, it would provide "an enormous benefit to society."

The study and accompanying editorial appeared in The New England Journal of Medicine (June 2, 2005; 352: 2271-2284). The lead author was Michael N Oxman MD.

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