Chickenpox Vaccine Cuts Deaths but Raises Questions on Shingles

By Andrew Pollack Feb. 3, 2005

The vaccine against chickenpox has sharply cut the death rate from the childhood disease, according to a study released yesterday.

But even as the vaccine protects children, questions are arising about whether its use will increase the incidence of a related disease, shingles, in adults.

The concern arises from a hypothesis, backed by some evidence, that exposure to children with chickenpox helps increase adults' immunity to shingles, which is caused by the same virus. With far fewer children contracting chickenpox because of the vaccine, that effect would vanish, and adults, who have by and large, not been vaccinated, would be at greater risk of shingles.

"We already know the impact the varicella vaccine has had on chickenpox," Dr. Marietta Vásquez, an assistant professor of pediatrics at Yale University School of Medicine, said as she used the medical term for the vaccine. "Now it's time to see what impact the varicella vaccine has had on shingles."

Dr. Vásquez, along with a Yale colleague, Dr. Eugene D. Shapiro, wrote a commentary in the current edition of The New England Journal of Medicine that hailed the effectiveness of the vaccine for chickenpox but urged more study of its effects on shingles.

The same journal includes the study that shows that deaths from

chickenpox in the United States dropped to 66 a year from 1999 to 2001, from 145 a year in 1990 to 1994.

The vaccine was introduced in 1995. While not usually fatal, chickenpox can be deadly, particularly to infants or adults or to people sick with another illness.

The paper, written by researchers at the Centers for Disease Control and Prevention, was based on nationwide statistics culled from death certificates.

The new information could spur greater use of the vaccine, researchers said.

The vaccine has been somewhat controversial and is not routinely used overseas. In the United States the vaccination rate for children, although having risen to 85 percent, is still below that for some other vaccines, said Dr. Jane F. Seward, the chief of the viral vaccine preventable disease branch at the C.D.C. and a senior author of the paper on the mortality from chickenpox.

One concern in other countries is whether using the vaccine would increase the rate of shingles in adults. Shingles, evidenced by a rash, blisters and pain, can lead to nerve damage called post-herpetic neuralgia that can last for weeks or months and cause excruciating pain, even from the touch of a shirt against the skin.

Editors' Picks

'As I Came Up the Stairs to Street Level, I Spied a Shining Lincoln Head'

May 3, 2020

Porches, Yards, Driveways, Parking Lots: Where the Neighborhood Is Now

May 1, 2020

Working From Home, Celebrities Grapple With Revealing Too Much

May 4, 2020

Andy Warhol, Superstar

May 3, 2020

A Mother, a Pandemic and Scorched Rice

April 28, 2020

Peru's Queen of Quechua Rap Wants to Rescue Indigenous Culture With Her Music

April 28, 2020

Smash a Coronavirus Piñata. You'll Feel Better.

May 4, 2020

2002: When the Rock Went Hollywood and Movie Stars Still Ruled

April 30, 2020

Jerry Seinfeld Is Making Peace With Nothing: He's 'Post-Show

[Business’](#)

[May 4, 2020](#)

[No One to Hunker Down With](#)

[April 30, 2020](#)

Infectious disease modelers at the Health Protection Agency in Britain estimated that shingles might increase 30 percent to 50 percent from vaccination. The harm from that increase would outweigh the benefits of reducing chickenpox rates in children, the modelers said. They conceded that their conclusions rested on assumptions about how much the rate of shingles would increase, which is not known.

Dr. Ann M. Arvin, a professor of pediatric infectious disease at Stanford, who has been a consultant to Merck, maker of the chickenpox vaccine, said, "We definitely need to pay attention to this question, but at this point it's a hypothetical question, I think."

Shingles, also called herpes zoster, is caused by reactivation in the body of the varicella-zoster virus, the cause of chickenpox. After people have chickenpox, the virus remains dormant, held in check by the body's immune system. But sometimes it becomes active again, particularly in elderly people or those with compromised immune systems.

There is already evidence that exposure to children with chickenpox helps act like a booster shot to the immune system, keeping shingles from occurring.

Mothers caring for children with chickenpox experience an increase in

immunity against the virus, as shown by measurements of their blood. And a study by researchers at the London School of Hygiene and Tropical Medicine that compared 244 people with shingles with controls without the disease found that people who had the most contact with children had one-fifth the risk of shingles of those with the least exposure.

Whether shingles is increasing in the United States is not clear. Dr. Seward said the disease control center was conducting studies. One study, using records from the Group Health Cooperative, a health system in Seattle, has not shown an increase, she said, adding that she could not discuss the study in detail because it is awaiting publication.

"We would say based on the best available data we have that we don't see any increase in herpes zoster," Dr. Seward said.