

Chickenpox, shingles vaccine may cause corneal inflammation in some patients

January 20 2016



Frederick Fraunfelder, M.D., chair of the Department of Ophthalmology at the University of Missouri School of Medicine, has found, in rare instances, a link between the varicella zoster virus vaccine and corneal inflammation. It is a finding the researchers say should be discussed by primary care physicians and patients with a history of eye inflammation before getting vaccinated. Credit: Justin Kelley/MU Health

In use for more than 20 years, the varicella zoster virus vaccine for chickenpox and shingles is considered an essential medicine by the World Health Organization (WHO). However, researchers from the University of Missouri School of Medicine have found, in rare instances, a link between the vaccine and corneal inflammation. It is a finding the researchers say should be discussed by primary care physicians and patients with a history of eye inflammation before getting vaccinated.

"Keratitis, or inflammation of the clear layer on the front of the eye, is a vision issue that can cause serious complications or even permanent damage to your vision if left untreated," said Frederick W. Fraunfelder, M.D., chair of the Department of Ophthalmology at the MU School of Medicine and director of MU Health Care's Mason Eye Institute. "By studying case reports from national and international registries, we found at least 20 cases of keratitis occurred in children and adults within a month of administration of the chickenpox and shingles [vaccine](#). While this is a rare occurrence, it's important for physicians to know when giving the vaccine to individuals who have a history of the condition because it could be reactivated by the vaccine."

Fraunfelder is the director of the National Registry of Drug-induced Ocular Side Effects, an international effort to gather information on adverse ocular events associated with drugs, chemicals or herbs. The registry collects data from the U.S. Food and Drug Administration spontaneous reporting database, the WHO spontaneous reporting database and reports from physicians who submit to the registry.

A review of the database and previously published reports found 20 cases of keratitis with a close relationship to administration of the vaccine. For adults, symptoms of keratitis developed within 24 days of vaccination. For pediatric patients, symptoms of inflammation developed within 14 days.

Using the WHO classification system for [adverse drug reactions](#), the researchers found a probable relationship between the vaccine and keratitis. However, the researchers recommend the majority of patients still be regularly vaccinated against chickenpox and shingles.

"It's important to note that keratitis associated with these vaccines is very rare, and by itself is not a reason to forego vaccination," Fraunfelder said. "But for patients who have a history of keratitis, we recommend they talk to their [primary care physician](#) before getting vaccinated. If these individuals are vaccinated, they should be closely monitored to ensure they don't experience corneal inflammation or additional scarring."

The study, "Varicella and Zoster Vaccine-associated Keratitis," was presented at the 2015 meeting of the American Academy of Ophthalmology in Las Vegas. In addition to Fraunfelder, the researchers included Anthony Grillo, M.D., fellow in the MU Department of Ophthalmology.

Provided by University of Missouri-Columbia

Citation: Chickenpox, shingles vaccine may cause corneal inflammation in some patients (2016, January 20) retrieved 25 April 2024 from <https://medicalxpress.com/news/2016-01-chickenpox-shingles-vaccine-corneal-inflammation.html>

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