

Steroids could help heal some corneal ulcers

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A UCSF study gives hope to those suffering from severe cases of bacterial corneal ulcers, which can lead to blindness if left untreated. The use of topical corticosteroids in a randomized controlled trial was found to be neither beneficial nor harmful in the overall patient population in the study. However, it helped patients who had more serious forms of bacterial corneal ulcers, according to UCSF researchers.

In a paper published this month in the [Archives of Ophthalmology](#), one of the [JAMA/Archives](#) journals, researchers found significant vision improvement—one and a half to two lines of improvement on an eye chart—by using steroid therapy on patients with severe ulcers.

"We consider this finding very significant; it's a clinically meaningful difference," said the paper's co-author Nisha Acharya, MD, MS, associate professor and director of the Uveitis Service in the UCSF Department of Ophthalmology. Although secondary to the study's original purpose, Acharya said the results in severe cases were identified early on, so "we didn't start doing all of these analyses after the fact. It was of interest. So I think there is something there."

The use of topical corticosteroids is somewhat controversial within the [ophthalmology](#) community, with no specific evidence pointing one way or the other. Concerns include corneal perforation and worsening vision.

"It's important to note that in the worst ulcer group, not only do we not find a safety problem, we actually found that steroids resulted in a

benefit in vision," Acharya said. "So I think that is really reassuring because those were the people with whom we were most scared to use steroids."

UCSF researchers collaborated with colleagues at the Aravind Eye Care System, in Madurai, India. They studied 500 participants from the United States and India between September 2006 and February 2010 in the Steroids for Corneal Ulcers Trial (SCUT). Half of the patients received corticosteroid treatment and the other half received placebos.

Complications from contact lens use are the most common culprit in corneal ulcers in the United States, while agriculture-related injuries are the most common in India. Researchers checked participants three months after the start of the trial, testing for visual acuity and corneal perforations. Patients showed no significant improvement in their vision for participants in the corticosteroid treatment group versus those in the control group.

The study also reinforced the use of steroids in treatment of the ulcers because it found that they were not harmful.

"There was no increase in cornea perforations in our patient population," Acharya said. "I'm reassured to know that it's not associated with harm."

Building on their findings, Acharya and her colleagues intend to continue their work, studying patients with even more severe corneal ulcers.

"It makes us feel like we're moving towards an evidence-based paradigm of care for corneal ulcers rather than a trial and error sort of approach," Acharya said. "We have a good collaboration and now that we've had some success with this, we hope to be able to continue with it to answer other questions related to this field."

Provided by University of California, San Francisco

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