

New treatment found to reduce vision loss from central retinal vein occlusion

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Scientists have identified the first long-term, effective treatment to improve vision and reduce vision loss associated with blockage of large veins in the eye. This research was part of a multi-center, phase III clinical trial supported by the National Eye Institute (NEI) at the National Institutes of Health.

The Standard Care vs. Corticosteroid for Retinal Vein Occlusion (SCORE) study, conducted at 84 clinical sites, found that eye injections of a corticosteroid medication could reduce [vision loss](#) related to the blockage of major blood vessels within the eye, a condition known as central retinal vein occlusion (CRVO). Treated patients were also five times more likely to gain vision after one year than patients who were under observation.

"These are extremely compelling results because a large, longer-term clinical trial has never before shown that patients with central retinal vein occlusion could experience a visual improvement with treatment," said Michael S. Ip, M.D., associate professor at the University of Wisconsin, Madison, and chair of the SCORE study.

In the United States, vein occlusion is estimated to be the second most common condition affecting blood vessels in the retina. Currently, no treatment exists for CRVO, in which a blood clot slows or stops circulation in a large vein within the eye's light-sensitive retinal tissue. Reduced retinal circulation may lead to new [blood vessel growth](#) and blood vessel leakage, resulting in retinal tissue swelling—a common

cause of vision loss from CRVO.

Until now, there has been no proven, effective way to treat CRVO. However, some ophthalmologists have treated patients with eye injections of an anti-inflammatory corticosteroid called triamcinolone, though its effectiveness had not been tested in a clinical trial. The SCORE study was the first to compare the safety and effectiveness of standard care observation with two different dosages of triamcinolone: 1 milligram and 4 milligrams. The results appear in the September 2009 issue of *Archives of Ophthalmology*, published alongside findings from a separate trial within the SCORE Study, which looked at blockages in smaller retinal veins.

Study participants included 271 people with CRVO who were an average of 68 years old. Patients in the treatment group could receive a maximum of three corticosteroid injections every year for up to three years, based on the state of their disease.

At one year, patients who received either dose of the corticosteroid medication were five times more likely than those who did not receive treatment to experience a substantial visual gain of three or more lines on a vision chart—equivalent to identifying letters that were half as small as they could read before treatment. However, patients in the 1 milligram group had fewer side effects related to increased eye pressure and cataract formation than those in the 4 milligram group.

"These are very welcome results because up to now there has been no effective way to treat patients who have a central retinal vein occlusion," said Frederick L. Ferris III, M.D., clinical director of the NEI. "Now, clinicians could offer CRVO patients a low-dose [corticosteroid](#) injection that may increase their chance of visual improvement."

Source: NIH/National Eye Institute

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