Study: Statins Reduce Glaucoma Risk

Researchers may have discovered yet another potential use for the widely used cholesterol-lowering drugs known as statins.

In a new study, older people with high cholesterol who had taken statins for two years had an 8 percent reduced risk of developing open-angle glaucoma, the most common form of the eye disease.

"That's a big deal," said Dr. Mark Fromer, an ophthalmologist at Lenox Hill Hospital in New York City, and eye surgeon director for the New York Rangers hockey team. "We're talking 3 million people [in the United States] who have glaucoma and half those people don't know it."

Dr. Fromer was not involved with the study, which appears in the October issue of Ophthalmology.

Glaucoma, which often affects people over 60, can lead to blindness. People at higher risk include those with a family member with glaucoma, blacks and older Hispanics, according to the Glaucoma Research Foundation.

Originally developed to treat high cholesterol, statins such as Lipitor (atorvastatin) and Zocor (simvastatin) have been studied for their possible benefits in a number of other conditions, including central nervous system disorders such as ischemic stroke, Alzheimer's and multiple sclerosis.

"There's growing evidence that statins may be beneficial beyond their cholesterol-lowering properties," said study lead author Dr. Joshua Stein, an assistant professor of ophthalmology and visual sciences at the University of Michigan Kellogg Eye Center in Ann Arbor.

An earlier study by Stein's team had found that people with metabolic syndrome -- a cluster of symptoms linked to diabetes and heart disease -- who had high cholesterol as one of their defining symptoms had a decreased risk of glaucoma compared to those who didn't have high cholesterol as part of the syndrome.

In this new study, the researchers set out to determine if it was the high cholesterol or treatment for the high cholesterol that might be behind the decreased glaucoma risk.

A review of medical records of more than 500,000 Americans over the age of 60 with high cholesterol found that those taking statins had a 0.3 percent decreased risk of developing glaucoma for every month they took statins.

Those who took statins continually for one year had a 4 percent to 5 percent reduced risk compared to people not taking statins.

The likelihood of actually developing glaucoma in people with risk factors for the condition was also decreased, as was the risk of requiring some kind of treatment for the condition, suggesting that the earlier people take statins the greater the apparent benefit.

People on non-statin cholesterol-lowering medications, on the other hand, didn't have a reduced risk of glaucoma, suggesting "there's something special about statins beyond just their cholesterol-lowering properties," Stein said.

Statins' effect on the central nervous system is a potential mechanism for the finding, the researchers suggested, as glaucoma affects both the optic nerve and the retinal nerve fibers. Statins also increase the activity of an enzyme that affects blood flow, possibly resulting in improved blood flow to the eye.

Or statins might be decreasing eye pressure, a major risk factor for glaucoma, the researchers suggested.

The trial, however, was not designed to determine a cause-and-effect relationship between statins and glaucoma, so all that can be said at this point is that there's a link.

Nor is it yet known if the medications might stave off glaucoma in people without high cholesterol, meaning the findings aren't enough to recommend taking statins just to reduce the risk of glaucoma.

But they do suggest that people taking these medications to lower their cholesterol may be gaining an added, unexpected benefit, the authors say.

SOURCES: Joshua D. Stein, M.D., assistant professor of ophthalmology and visual sciences, University of Michigan Kellogg Eye Center, Ann Arbor, Mich.; Mark Fromer, M.D., ophthalmologist, Lenox Hill Hospital, New York City and eye surgeon director, New York Rangers; October 2012, Ophthalmology