Macular Degeneration Risk May Be Increased by Aspirin Use

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Dec 19, 2012

Using aspirin for at least 10 years was associated with a small but statistical increase in the development of late age-related macular degeneration (AMD), according to results from a new study published in the December 19 issue of JAMA.

Participants (N = 4926) between 43 and 86 years of age were enrolled in the Beaver Dam Eye Study, a longitudinal population-based study of AMD in Wisconsin. The majority of participants were white (99%), and 56% were women. During examinations, which were performed every 5 years during a 20-year period (from 1988-1990 through 2008-2010), participants were asked whether they had routinely used aspirin at least twice weekly for more than 3 months. The mean duration of follow-up was 14.8 years.

Lead researcher Barbara E.K. Klein, MD, MPH, from the Department of Ophthalmology and Visual Sciences, University of Wisconsin School of Medicine and Public Health, Madison, and colleagues measured the incidence of early and late AMD as well as 2 subtypes of late AMD: neovascular AMD and pure geographic atrophy.

During the study, researchers found 512 incident cases of early AMD and 117 incident cases of late AMD. The routine use of aspirin 10 years before the examination was significantly associated with the incidence of late AMD (hazard ratio [HR], 1.63; 95% confidence interval [CI], 1.01 - 2.63; P = .05). The estimated incidence was 1.76% (95% CI, 1.17% - 2.64%) in those who regularly used aspirin and 1.03% (95% CI, 0.70% - 1.51%) in nonusers. Early AMD, however, did not appear to be significantly associated with aspirin use 5 or 10 years before retinal examination (HR, 0.86 [95% CI, 0.71 - 1.05; P = .13] and HR, 0.86 [95% CI, 0.65 - 1.13; P = .28, respectively]).

The researchers found that neovascular AMD specifically was significantly associated with regular aspirin use 10 years before retinal examination (HR, 2.20; 95% CI, 1.20 - 4.15; P = .01) but that there was no association with the incidence of pure geographic atrophy (HR, 0.66; 95% CI, 0.25 - 1.95; P = .45).

In addition, the study authors found no significant relationship between milligrams of aspirin taken per day either 5 or 10 years before retinal examination and incidence of early AMD (P = .27) or late AMD (P = .37).

"Our findings are consistent with a small but statistically significant association between regular aspirin use and incidence of neovascular AMD," the authors write. They declined an interview with Medscape Medical News.

To assess the possible effects of systemic inflammation and protective effects of aspirin in cardiovascular disease, the researchers also evaluated the associations of leukocyte count and C-reactive protein (CRP) level with incidence of AMD. Neither were found to be associated with incidence of early AMD (P = .13 for leukocyte count; P = .21 for CRP level) or late AMD (P = .56 for leukocyte count; P = .29 for CRP level).

The researchers acknowledge study limitations such as a lack of data on aspirin exposure, leukocyte count, and CRP measurements at some visits. They also note that because the majority of the study population was white, it is difficult to generalize these findings to other races/ethnicities.

Risks vs Benefits

G. Baker Hubbard, MD, associate professor of ophthalmology at Emory University School of Medicine, Atlanta, Georgia, and an expert correspondent for the American Academy of Ophthalmology, commented to Medscape Medical News: "Controversy has existed about whether aspirin use affects the risk of progressive vision loss in patients with AMD. These findings reinforce previous studies that have found a small but significant increased risk of vision loss due to AMD in patients taking aspirin."
Dr. Hubbard noted, however, that other studies have not found an association between aspirin use and AMD, and cautioned, "[t]he findings of the present study therefore need to be replicated before definite conclusions about an association can be confirmed."

"This small risk of vision loss must be weighed against the benefit of aspirin for each individual patient in consultation with their physician," Dr. Hubbard said.

*Funding for this study was provided by the National Institutes of Health and the National Eye Institute. Additional support was provided by Senior Scientific Investigator Awards from Research to Prevent Blindness. One coauthor reported serving as a consultant to Pfizer. The other authors and independent commentator have disclosed no relevant financial relationships.

*JAMA. 2012;308:2469-2478. [Abstract](#)