Study suggests link between regular aspirin use, increased risk of age-related macular degeneration

January 21 2013

Regular aspirin use appears to be associated with an increased risk of neovascular age-related macular degeneration (AMD), which is a leading cause of blindness in older people, and it appears to be independent of a history of cardiovascular disease and smoking, according to a report published Online First by *JAMA Internal Medicine*.

Aspirin is one of the most widely used medications in the world and is commonly used in the prevention of cardiovascular disease, such as myocardial infarction (heart attack) and ischemic stroke. While a recent study suggested that regular aspirin use was associated with AMD, particularly the more visually devastating neovascular (wet) form, other studies have reported inconsistent findings. Smoking is also a preventable risk factor for AMD, the authors write in the study background.

Gerald Liew, Ph.D., of the University of Sydney, Australia, and colleagues examined whether regular aspirin use (defined as once or more per week in the past year) was associated with a higher risk of developing AMD by conducting a prospective analysis of data from an Australian study that included four examinations during a 15-year period. Of 2,389 participants, 257 individuals (10.8 percent) were regular aspirin users.

After the 15-year follow-up, 63 individuals (24.5 percent) developed

incident neovascular AMD, according to the results.

"The cumulative incidence of neovascular AMD among nonregular aspirin users was 0.8 percent at five years, 1.6 percent at 10 years, and 3.7 percent at 15 years; among regular aspirin users, the cumulative incidence was 1.9 percent at five years, 7 percent at 10 years and 9.3 percent at 15 years, respectively," the authors note. "Regular aspirin use was significantly associated with an increased incidence of neovascular AMD."

The authors note that any decision concerning whether to stop aspirin therapy is "complex and needs to be individualized."

"Currently, there is insufficient evidence to recommend changing clinical practice, except perhaps in patients with strong risk factors for neovascular AMD (e.g., existing late AMD in the fellow eye) in whom it may be appropriate to raise the potentially small risk of incident neovascular AMD with long-term aspirin therapy," the authors conclude.

In an invited commentary, Sanjay Kaul, M.D., and George A. Diamond, M.D., of Cedars-Sinai Medical Center, Los Angeles, write: "This study has important strengths and limitations. It provides evidence from the largest prospective cohort with more than five years of longitudinal evaluation reported to date using objective and standardized ascertainment of AMD."

"The key limitation is the nonrandomized design of the study with its potential for residual (unmeasured or unobserved) confounding that cannot be mitigated by multivariate logistic regression or propensity score analysis," the authors continue.

"From a purely science-of-medicine perspective, the strength of evidence is not sufficiently robust to be clinically directive. These

findings are, at best, hypothesis-generating that should await validation in prospective randomized studies before guiding clinical practice or patient behavior," the authors conclude. "However, from an art-of-medicine perspective, based on the limited amount of available evidence, there are some courses of action available to the thoughtful clinician. In the absence of definitive evidence regarding whether limiting aspirin exposure mitigates AMD risk, one obvious course of action is to maintain the status quo."

More information: *JAMA Intern Med*. Published online January 21, 2013. doi:10.1001/jamainternmed.2013.1583
JAMA Intern Med. Published online January 21, 2013. doi:10.1001/jamainternmed.2013.2530