

## Statins Linked to Cataracts in Large, Retrospective Study

By: Shelley Wood

Another large study is linking statin use to the development of cataracts[1]. The latest, following on a Canadian analysis last year, is a propensity score-matched analysis of over 45 000 subjects in a military healthcare system, published this week in JAMA Ophthalmology.

As Dr Jessica Leuschen (Wilford Hall Ambulatory Surgery Center, San Antonio, TX) and colleagues point out, observational studies of statins have been conflicting, with some suggesting an increased risk of cataracts with statin use while others appear to show a beneficial effect of statins on cataract risk. At the recent European Society of Cardiology (ESC) 2013 Congress, Dr John B Kostis (Rutgers Robert Wood Johnson Medical School, New Brunswick, NJ) presented the results of a random-effects meta-analysis, showing a 20% lower rate of cataracts with statin use compared with no statin use, with a more pronounced benefit seen when statins were started in younger patients.

The meta-analysis published today, however, found the opposite. It matched 6972 statin users with nonusers within the San Antonio Military Multi-Market Area health system using propensity scores based on variables that increased the likelihood of receiving statins and increased the risk of developing cataracts. Statin users had to have been on the drugs for more than 90 days; simvastatin was prescribed in almost three-quarters of the patients.

They found that statin users in the propensity-matched analysis had a 9% increase in cataracts. In secondary analyses that looked at all patients with no comorbidities (based on the Charlson index) at baseline, the risk of developing cataracts was 29% higher in the statin users. Results were consistent regardless of whether patients had been taking statins for two, four, or six years, authors note.

The study is the first to use propensity matching to try to eliminate baseline confounding--making it a key contribution to the relatively recent research into this potential interaction. To heartwire, senior author Dr Ishak Mansi (VA North Texas Health Care System, Dallas) noted that there are a number of ways in which statins could be a marker for important confounders, including accessible healthcare and health insurance, as well as underlying risk factors such as smoking, diabetes, and older age--all of which are also risk factors for cataract.

That kind of confounding may have been a factor in the Kostis et al meta-analysis at ESC, Mansi commented, when asked about the divergent findings, adding that since the paper is not yet published, he hasn't had a chance to review its methodology.

"Without knowing the specifics of the paper . . . I can generally say the following: During the mid-1990s and early 2000s, there were many papers that associated statin use with improved outcomes of many diseases such as cataract, fracture, infection, dementia, etc; however, recently, it was realized that statin use was associated with 'healthy-user bias.' That is to say, individuals who are health-conscious are more likely to take statins, and better outcomes may be secondary for their health consciousness and not due to the statin itself. . . . Therefore, if this meta-analysis included large-volume studies that date back to this period of time, their results may be affected by these biases of these studies."

Cardiologists have had plenty of experience with seemingly contradictory studies, he added. "Historically, we have been through these controversies on several topics, such as the use of hormonal-replacement therapy, treatment of chronic systolic heart failures with antiarrhythmic drugs, etc. We will have to study and search for our best capabilities until we reach an answer.

"Statins are very effective medications; therefore, side effects are expected. Healthcare providers should make sure that there is justifiable indication to prescribe statins according to guidelines and that the potential benefits outweigh the potential risks of side effects for individual patients. These medications should not be prescribed lightly."

For the public, however, the message is slightly different. "For some patients, these medications have been a main tool in treatment of heart disease and should not be stopped because of a small higher risk of association with other diseases," Mansi said. All effective medications can be expected to have side effects, he continued. "It is much better to do your best to lower your own risk of cardiovascular disease (if feasible) by stopping smoking and keeping physically active than to take a pill to lower your risk of heart disease."

## References

1. Leuschen J, Mortensen EM, Frel CR, et al. JAMA Ophthalmol 2013; DOI:10.1001/jamainternmed.2013.4575. Available at: <http://archophth.jamanetwork.com/journal.aspx>.