Medical Xpress

Statin use associated with reduction in prostate specific antigen levels

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Use of cholesterol-lowering statins is associated with a statistically significant decline in prostate specific antigen (PSA) levels, according to a report in the October 28 online issue of the *Journal of the National Cancer Institute*.

Previous studies examined whether statin use was associated with a reduction in prostate cancer risk. The results, however, have been inconsistent. Few studies have examined the association between statins and PSA level.

In the current study, Stephen Freedland, M.D., of the Durham Veterans Affairs Medical Center and Duke University School of Medicine in Durham, N.C., and colleagues examined computerized medical records of 1,214 men who were prescribed statins between 1990 and 2006 at the Durham Veterans Affairs Medical Center. To learn whether statin use was associated with changes in PSA, the investigators compared PSA values taken up to two years before initiation of statin therapy and PSA values measured within one year after initiation of statin use.

The researchers saw a median decline in PSA of 4.1% and a 27.5% median decline of low-density lipoprotein (LDL) in the participants, both of which were statistically significant changes. Moreover, men with higher initial PSA levels had, on average, larger declines after starting on statins than men who had low initial PSA levels; the PSA declines correlated with the magnitude of the LDL decrease. Specifically, among men most likely to be under consideration for prostate biopsy (pre-statin

PSA levels ≥2.5 ng/mL) those with the biggest declines (highest quartile) in LDL after starting a statin experienced a 17% decline in PSA. The decline in PSA also strongly correlated with the dose of statin and this dose-dependency was associated with PSA even after the researchers accounted for drop in LDL.

"The PSA declines with statin use that we observed may represent objective evidence of statins influence on prostate biology in support of epidemiological studies suggesting statins reduce overall or advanced prostate cancer risk. More importantly, this PSA decline, if confirmed in future studies, may complicate prostate cancer screen¬ing because cancers may be missed due to the lower PSA levels, and this fact should be kept in mind when evaluating men taking statins," the authors write. The impact of such a change on prostate cancer mortality, the authors note, is unclear because there is no level 1 evidence to indicate that PSA screening lowers prostate cancer mortality.

In an accompanying editorial, Ian Thompson, M.D., of the University of Texas Health Science Center in San Antonio and colleagues suggest that the new data should be interpreted with caution. While it is possible that statins alter prostate biology, a reduction in PSA does not necessarily correlate with a reduction in cancer risk. Moreover, the observational study design used by Freedland and colleagues could lead to unintended bias in the results. Finally, although the 4.1% drop in median PSA is statistically significant, it may not be clinically meaningful.

Therefore, further studies are needed to better understand the impact of statins on a prostate cancer, the editorialists conclude. "If statins do lower PSA, only a randomized trial with histological end¬points can determine whether statins affect a man's risk of prostate cancer," they write.

Source: Journal of the National Cancer Institute