Cholesterol-lowering drugs may slow prostate growth

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Statins drugs prescribed to treat high cholesterol may also work to slow prostate growth in men who have elevated PSA levels, according to an analysis led by researchers at Duke University Medical Center.

The finding, presented at the annual meeting of the American Urological Association, provides additional insight into the effects of cholesterol-lowing drugs such as statins on the prostate. Previous studies at Duke and elsewhere had found a link between statins and lower levels of PSA, a protein produced by the prostate that is often elevated by cancer or by non-lethal prostatic diseases.

In the current finding, prostatic growth rate diminished among men with elevated PSA levels who took statins, although that effect was relatively small and tapered off after about two years.

"Given that prostate enlargement is an important health problem in the United States and elsewhere, and will be a larger problem as the population ages, it's important to understand and treat its causes," said Roberto Muller, M.D., a urology fellow at Duke and lead author of the study.

Enlarged prostate, most commonly diagnosed as benign prostate hyperplasia, causes urinary problems that can escalate to bladder and kidney damage. Up to 90 percent of men over the age of 70 have some symptoms associated with enlarged prostate, according to the National Institutes of Health.

Muller and colleagues used data gathered for an unrelated, large trial originally testing whether a drug called dutasteride could help reduce the risk of prostate cancer. To test their hypothesis that statins may be associated with slower prostate growth, the researchers culled the data of more than 6,000 men, including 1,032 who also took statins.

Men on statins tended to be older than non-users, and thus were expected to have greater prostate sizes. But prostate sizes were actually similar between statin users and non-users at the start of the study. That finding provided the first suggestion that statins might affect prostate growth.

When changes in prostate growth were compared two years after the start of the trial, men in the study who took a statin drug had less prostate growth, regardless of whether they had been randomly assigned to take dutasteride or a dummy pill. Prostate growth was an average 5 percent less in men who took both a statin and dutasteride pill compared to men who took only dutasteride. For those taking a statin and a dummy pill, prostate growth was 3.9 percent less than for men taking only the placebo.

Those reductions, however, did not persist after two years.

"We don't yet understand the mechanisms that might be causing this," Muller said. "Some have suggested that statins may have anti-inflammatory properties, and inflammation has been linked to prostate growth, but this needs further study."

Muller said the findings in the current research also suggest that lifestyle choices such diet and exercise may not only affect cholesterol, but also prostate health.

"Prostate enlargement was once considered an inexorable consequence of aging and genetics, but there is growing awareness that prostate growth can be influenced by modifiable risk factors," Muller said. "In this context, the role of blood cholesterol levels and cholesterol-lowering drugs such as statins warrants further study."

Provided by Duke University Medical Center