Medical Xpress

Data re-analysis shows drug finasteride reduces risk for most prostate cancers

May 20 2008

A re-analysis of data from the landmark Prostate Cancer Prevention Trial (PCPT) finds that finasteride reduces the risk for prostate cancer without boosting the odds of aggressive tumors.

PCPT, which involved more than 18,000 men 55 years of age or over, was stopped early in June 2003 because researchers noted that while it reduced prostate cancer in men taking finasteride (Proscar) by up to 25 percent, men taking finasteride also appeared to have more aggressive prostate tumors if and when they did develop the disease.

That caused some experts to worry that finasteride was encouraging higher-grade cancers.

But a new analysis led by researchers at NewYork-Presbyterian Hospital/Weill Cornell Medical Center should lay that worry to rest.

"Finasteride has long been used by doctors to treat benign enlarged prostate -- it shrinks the prostate. So when we accounted for this shrinkage in prostate volume, the disparity in tumor aggressiveness between the finasteride and placebo groups vanished," says study lead author Dr. Steven A. Kaplan, professor of urology at Weill Cornell Medical College and a urologist at NewYork-Presbyterian Hospital/Weill Cornell Medical Center.

He and his colleagues will present their findings Tuesday, May 20, at the annual meeting of the American Urological Association, in Orlando.

Physicians grade the aggressiveness of prostate tumors on what's called the Gleason Score -- a grading of tumor characteristics, with scores ranging from 2 to 10 (10 indicating the most highly aggressive cancers). "After their initial analysis, the PCPT investigators discovered that men taking finasteride had fewer prostate cancers overall, but a higher incidence of grades 7, 8, 9 and 10 cancers," Dr. Kaplan explains.

This was worrying, since it is higher-grade, potentially metastatic prostate cancers that are the real cause for clinical concern. "Lower-grade cancers are often what we call 'indolent,' meaning they grow so slowly they pose little real threat to the patient," Dr. Kaplan says. "So it was important to find out if this finding was real, or some kind of methodological artifact."

His team had one theory: "We know that finasteride shrinks the prostate. So perhaps that simply meant that doctors were better able to spot a highly aggressive tumor in patients taking the drug, because there was less tissue in which it could hide," explains senior author Dr. E. Darracott Vaughan, the James J. Colt Professor of Urology at Weill Cornell Medical College and a urologist at NewYork-Presbyterian Hospital/Weill Cornell Medical Center.

With that in mind, the researchers looked once more at PCPT data on biopsies taken from the 18,882 men in the study. They adjusted for treatment type, age, race, family history of prostate cancer, baseline prostate-specific antigen (PSA) levels, and the individual patient's prostate volume.

"What we found was a significant reduction in the incidence of prostate cancers for men taking finasteride vs. placebo -- even for the higher-grade cancers," Dr. Kaplan says. "Most importantly, finasteride was associated with significant declines in tumors with Gleason scores 5, 6 and 7, which comprise 72 percent of all prostate cancers diagnosed in

the United States. For tumors with Gleason scores of 8, 9 and 10, the incidence for men taking finastride was no higher than for men not taking the drug, after we had adjusted for prostate volume."

This means that men who are prescribed finasteride should not be concerned that the drug will boost their odds for aggressive prostate cancer. In fact, while it's too early to say that the drug prevents the disease, it may sometimes help suppress it when it occurs, the researchers say.

"I believe that the drug is chemo-suppressive," Dr. Kaplan says. "We know that it reduces PSA levels, which are indicative of prostatic disease. Finasteride appears to be particularly adept at suppressing the more indolent cancers. So in the future, it might be useful to use the drug to determine just how aggressive -- and needful of treatment -- a particular tumor is. If the patient takes finasteride and his PSA levels quickly drop, he probably has a less-threatening tumor that may just require 'watchful waiting.' But if PSA levels rise, that tumor may need more active treatment. All of this needs to be tested in a controlled, randomized trial."

In the meantime, researchers need to keep prostate volume in mind whenever they conduct trials assessing the anticancer properties of prostate-shrinking medications. "Right now, drug maker GlaxoSmithKline is testing out a similar drug, Avodart, as a possible agent against prostate cancer. We hope that they will incorporate prostate volume in their analysis, to help avoid the confusion that dogged PCPT," Dr. Kaplan says.

Source: Weill Cornell Medical College