Prostate cancer medications linked with increased risk of heart-related deaths in men with cardiovascular problems

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A new study has found that certain prostate cancer medications are linked with an increased risk of dying from heart-related causes in men with congestive heart failure or prior heart attacks. Published in *BJU International*, the findings will help doctors and patients weigh the benefits and risks of the drugs.

Androgen deprivation therapy (ADT), which reduces levels of male hormones in the body to prevent them from stimulating cancer cells, is a mainstay of treatment for prostate cancer. Despite its anticancer effects, ADT has been associated with heart problems, including increased risk of diabetes, coronary heart disease, heart attacks, and sudden cardiac death. To investigate this potential link thoroughly, Paul Nguyen, MD, of the Dana-Farber/Brigham and Women's Cancer Center in Boston, along with David Ziehr of Harvard Medical School and their colleagues, analyzed information on 5,077 men with prostate cancer who were treated between 1997 and 2006. Thirty percent of these men received ADT, while the others did not.

After a median follow-up of 4.8 years, no association was detected between ADT and heart-related deaths in men with no cardiac risk factors (1.08 percent at five years for ADT versus 1.27 percent at five years for no ADT) or in men with diabetes, hypertension, or high cholesterol (2.09 percent vs 1.97 percent). However, ADT was associated with a 3.3-times increased risk of heart-related deaths, in men

with congestive heart failure or prior heart attacks. In this subgroup, heart-related deaths occurred in 7.01 percent of men receiving ADT versus 2.01 percent of men not receiving after five years. This suggests that administering the therapy to 20 men in this potentially vulnerable subgroup could result in one cardiac death.

"While androgen deprivation therapy can be a lifesaving drug for men with prostate cancer and significantly increase the cure rates when used with radiation for aggressive disease, this study also raises the possibility that a small subgroup of men who have significant heart disease could experience increased cardiac death on ADT," said Dr. Nguyen. He noted that because the study was retrospective, it must be carefully weighed against larger controlled trials that have demonstrated the benefits of ADT. "I would still say that for men with significant heart problems, we should try to avoid ADT when it is not necessary—such as for men with low-risk disease or men receiving ADT only to shrink the prostate prior to radiation. However, for men with high-risk disease, in whom the prostate-cancer benefits of ADT likely outweigh any potential cardiac harms, ADT should be given even if they have heart problems, but the patient should be followed closely by a cardiologist to ensure that he is being carefully watched and optimized from a cardiac perspective."

More information: "Association of androgen deprivation therapy with excess cardiac-specific mortality in men with prostate cancer." David R. Ziehr, Ming-Hui Chen , Danjie Zhang, Michelle H. Braccioforte, Brian J. Moran, Brandon A. Mahal, Andrew S. Hyatt, Shehzad S. Basaria, Clair J. Beard, Joshua A. Beckman, Toni K. Choueiri, Anthony V. D'Amico, Karen E. Hoffman, Jim C. Hu, Neil E. Martin, Christopher J. Sweeney, Quoc-Dien Trinh, and Paul L. Nguyen. *BJU International*; Published Online: October 29, 2014 DOI: 10.1111/bju.12905

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