Medical Xpress

Does a man's estrogen level impact his risk of prostate cancer?

April 19 2010

A high level of one type of estrogen in a man's body might increase his risk of developing prostate cancer. That is one surprising conclusion from a new study which also offers another novel finding - that high levels of the estrogen considered fuel for breast cancer might offer a protective benefit against prostate cancer. Details of the research will be presented at the AACR 101st Annual Meeting 2010.

The health of the prostate has long been considered dependent on the level of the male hormones collectively known as androgens however, it is now recognized that estrogens and their metabolites (estrogen broken down by chemical processes in the body) play a role in its normal growth as well as in prostate cancer.

"The aim of our study was to evaluate the use of estrogen metabolites, as a marker for prostate cancer risk," says Ourania Kosti, PhD, at Georgetown Lombardi Comprehensive Cancer Center.

For the study, the researchers measured estrogens and their metabolites in the urine collected from 77 men with prostate cancer, 77 healthy controls and 37 men that underwent biopsy and but were diagnosed cancer-free.

The relative amounts of the 15 estrogens and estrogen metabolites in the urine of prostate cancer cases were similar to that of non-cancer patients with the exception of the estrogen metabolite 4-OHE1.

"This particular estrogen metabolite appeared to be more abundant among men diagnosed with prostate cancer," explains Kosti.

Kosti says her team also observed that the estrogen metabolites considered as 'harmful' estrogens in breast cancer (16-KE2 and 17-epiE3) are secreted in higher amounts among those without prostate cancer and in lower amounts in those with prostate cancer.

"This suggests that these particular estrogens may have a protective role against prostate cancer development," explains Kosti. "It is possible that different tissues respond to estrogens different ways, therefore the potential role of 16-KE2 and 17-epiE3 in prostate cancer prevention and management should be further explored."

Provided by Georgetown University Medical Center

Citation: Does a man's estrogen level impact his risk of prostate cancer? (2010, April 19) retrieved 3 May 2024 from
https://medicalxpress.com/news/2010-04-estrogen-impact-prostate-cancer.html