

Kidney Failure a Possible Risk of Prostate Cancer Hormone Treatment: Study

[Review looked at side effect from androgen deprivation therapy](#)

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By Dennis Thompson
HealthDay Reporter

TUESDAY, July 16, 2013 (HealthDay News) -- Hormone therapy for prostate cancer may dramatically increase a man's risk of kidney failure, according to a new study.

Use of androgen deprivation therapy was tied to a 250 percent increase in a man's chances of suffering acute kidney injury, Canadian researchers found in a review of more than 10,000 men receiving treatment for early stage prostate cancer.

The study appears in the July 17 issue of the *Journal of the American Medical Association*.

Androgen deprivation therapy uses medication or surgery to reduce the amount of male hormones in a man's body, which can then cause prostate cancer cells to shrink or grow more slowly.

It is a therapy usually reserved for advanced cases of prostate cancer, said study co-author Laurent Azoulay, a pharmacoepidemiologist at Jewish General Hospital's Lady Davis Institute, in Montreal. Previous research already has linked androgen deprivation therapy to a possible increased risk of heart attack.

These new findings tying hormone therapy to acute kidney injury -- a rapid loss of kidney function with a 50 percent mortality rate -- should prompt doctors to think twice before using androgen deprivation therapy to treat prostate cancer patients at little risk of dying from the disease, said Azoulay, also an assistant professor in McGill University's department of oncology.

"There is a big debate over who should receive androgen deprivation therapy, and the timing of use," he said. "In patients whose prostate cancer has spread, the benefits outweigh the risk, but now there's this jump to using [androgen deprivation therapy] in patients who would not typically die from prostate cancer. In that subgroup of patients, the risks might outweigh the benefit."

Dr. Durado Brooks, director of prostate and colorectal cancers for the American Cancer Society, called the Canadian study "intriguing."

"They did find what would appear to be a fairly strong association between androgen deprivation treatment and acute kidney injury," Brooks said. "This is something that men and their clinicians need to be aware of and watching out for if they choose to go with androgen deprivation therapy as part of their treatment plan for prostate cancer."

However, Brooks also noted that the study relied on past medical data and did not involve current prostate cancer patients compared against a control group.

"These results are suggestive that an association may exist, but they are not definitive," Brooks said. "There will need to be other research looking at this."

For the new study, the research team identified 10,250 men who had been diagnosed with nonmetastatic (not spreading) prostate cancer between 1997 and 2008, using patient data maintained by the United Kingdom. Researchers then tracked whether each patient had been hospitalized with acute kidney injury, and whether their kidney failure occurred during or after the hormone treatment.

Prostate cancer patients who received androgen deprivation therapy were 2.5 times more likely to suffer kidney failure, the study found. Their risk of acute kidney injury particularly increased if they received a combined androgen blockade, a therapy that uses different hormone-suppression methods to drastically decrease male and female hormone levels in the body.

Both male and female hormones play a large role in kidney function, Azoulay said, which could explain why androgen deprivation therapy can cause such drastic damage to the organ.

"Testosterone and estrogen have been shown to play an important role in renal [kidney] function," he said. "It seems that testosterone has vessel-dilating effects, and estrogen has a protective effect against renal injury."

More information

The American Cancer Society has more about [prostate cancer treatment](#).

SOURCES: Laurent Azoulay, Ph.D., pharmacoepidemiologist and project leader, Lady Davis Institute, Jewish General Hospital, Montreal, and assistant professor, department of oncology, McGill University, Montreal; Durado Brooks, M.D., M.P.H., director, prostate and colorectal cancers, American Cancer Society; July 17, 2013, *Journal of the American Medical Association*

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