Prostate Cancer Therapy Linked to Increased Risk of Heart Disease Death

The use of androgen deprivation therapy to treat localized prostate cancer is associated with an increased risk of death from heart disease, according to a study published online October 9 in the *Journal of the National Cancer Institute*.

Androgen deprivation therapy is frequently used to treat high-risk localized prostate cancer. Studies have shown that androgen deprivation therapy, when used with external beam radiation therapy, improves survival in patients with advanced and localized prostate cancer. But the use of androgen deprivation therapy can also lead to the development of metabolic syndrome, which increases the risk of type II diabetes or coronary artery disease.

Henry Tsai, M.D., of Harvard Medical School in Boston and colleagues investigated whether androgen deprivation therapy increases the risk of death from heart disease in patients treated for localized prostate cancer. They collected data on 3,262 patients treated by surgical removal of the prostate and 1,630 patients treated with certain radiation therapies or cryotherapy (in which the tumor tissue is frozen to kill the cells). Of these patients, about 1,000 were also treated with androgen deprivation therapy.

After a median follow-up of nearly 4 years, 131 patients died of heart disease. Both androgen deprivation therapy and older age were associated with an increased risk of death from heart disease. Among men 65 years and older who had their prostates removed, the 5-year incidence of heart disease-related death was 5.5 percent for those receiving androgen deprivation, and 2 percent among those who did not. For men younger than 65 years, the rates were also increased, 3.6 percent and 1.2 percent respectively. There was also an increased risk of death in men who received androgen deprivation in addition to radiation or cryotherapy, but it was not statistically significant.

“The results of this study and others support the view that use of [androgen deprivation therapy] may contribute to death from cardiovascular causes and underscore the importance of careful cardiovascular evaluation and intervention before initiating [androgen deprivation therapy] in patients with localized prostate cancer,” the authors write.

In an accompanying editorial, Jerome Seidenfeld, Ph.D, of the Blue Cross and Blue Shield Association in Chicago and colleagues explain that the design of the study makes it difficult to conclude whether androgen deprivation therapy caused the increase in deaths from heart disease. They point out that it is unlikely that androgen deprivation therapy would have these effects only in men whose prostates were removed but not those treated with radiation and other methods.

“The article by Tsai [and colleagues] has raised an interesting hypothesis, but patients and clinicians need better risk estimates for cardiovascular death associated with [androgen deprivation therapy] use that are based on randomized trials rather than retrospective analysis,” the editorialists write.

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