

Risk of heart failure or myocardial infarction may be increased by the hormonal therapy use for prostate cancer and mortality in men with coronary artery disease

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Several studies showed that in localized or locally advanced prostate cancer, use hormonal therapy and radiation therapy might be associated with a twofold risk of death in those men who also had a history of coronary artery disease.

The present study included retrospectively 5077 with clinical stage T1 to T3 N0 M0 men, between 1997 and 2006 at the Chicago Prostate Cancer Center, who were treated with brachytherapy for their cancer and of whom 30% received neoadjuvant hormone therapy with a median treatment duration of four months. The hormone therapy consisted of both a luteinizing hormone-releasing hormone agonist (leuprolide or goserelin) and a nonsteroidal antiandrogen (bicalutamide or flutamide).

The authors have reported the following results. Among the men, 2653 (52.3%) had no history of a cardiovascular comorbidity, 2168 (42.7%) had a coronary artery disease risk factor, and 256 (5%) had coronary artery disease. The median age of the men was 69.5 years, and 557 (10.9%) of the men also received supplemental external-beam radiation. Most of the men in the study (70%) did not receive neoadjuvant hormone therapy and served as comparators for the men who did. Neoadjuvant hormone therapy use was not significantly as-

sociated with an increased risk of all-cause mortality in men with no comorbidity (9.6% vs 6.7%; adjusted hazard ratio [HR] 0.97; 95% CI 0.72-1.32; $p=0.86$) or a single coronary artery disease risk factor (10.7% vs 7.0%; adjusted HR 1.04; 95% CI 0.75-1.43; $p=0.82$) after median follow-ups of 5.0 and 4.4 years, respectively. However, for men with coronary artery disease, the therapy was significantly associated with an increased risk of all-cause mortality (26.3% vs 11.2%; adjusted HR 1.96; 95% CI 1.04-3.71; $p=0.04$). These men had a median follow-up of 5.1 years. Therefore, the authors also noted that, in other research in different settings, hormone therapy has been associated with a variety of adverse effects, including increased risk of cardiovascular death.

According to this findings, Nanda and his colleagues recommend that, in men with favorable-risk prostate cancer and a history of coronary artery disease, alternative strategies to brachytherapy and hormone therapy be considered. These include active surveillance, treatment with external-beam radiation alone, and prostatectomy. However, in men with unfavorable-risk prostate cancer, hormone therapy offers a survival benefit, and the risks and benefits of hormone-therapy use must be balanced; as noted, appropriate medical evaluation or treatment is needed before the employment of the therapy in this setting. \square

Comment on the paper:

Nanda A, Chen MH, Braccioforte MH et al – Hormonal therapy use for prostate cancer and mortality in men with coronary artery disease-induced congestive heart failure or myocardial infarction. *JAMA* 2009; 302:866-873