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In Hypogonadism, Stroke May Be Prevented With Testosterone Replacement Therapy

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Testosterone replacement therapy (TRT) may exhibit a protective effect against myocardial infarction, stroke, and all-cause mortality in men with secondary hypogonadism. The findings were presented at the 26th Annual Scientific and Clinical Congress of the American Association for Clinical Endocrinologists (AACE), held May 3-7, 2017, in Austin, Texas.

There has been growing concern that testosterone replacement therapy is associated with adverse cardiovascular outcomes.

Given that there has been growing concern that TRT may be associated with an increased risk for adverse cardiovascular outcomes or mortality, investigators led by Joyce George, MD, of the Cleveland Clinic in Ohio, conducted a retrospective cohort study using electronic health records from a large health care database to examine outcomes.

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Records for men at least 40 years of age, with at least 2 testosterone levels <220 ng/dL (one obtained between 7 am and 10 am) were pulled from the database. Patients with primary hypogonadism, secondary hypogonadism related to overt hypothalamic

pituitary pathology, HIV infection, metastatic cancer, a history of prostate cancer, prostate specific antigen >4 ng/mL, elevated hematocrit, or a history of previous thromboembolic disease were not included in the final cohort.

The study ultimately included 418 men (median age 53.8 years) exposed to TRT and 283 matched controls (median age 54.9 years; *P* =.02). At baseline, the prevalence of established cardiovascular disease was 9.8% vs 12.7%, respectively (*P* =.23). The treatment group was followed for a median of 3.8 years compared with 3.4 years for the control group.

The event composite outcome in the treatment group was 3.3% compared with 6.4% in the control group, with the investigators ultimately observing a reduction in the odds of the combined cardiovascular end point in the treatment group (hazard ratio [HR] 0.49; 95% CI, 0.24-0.99; *P* =.046).

While “the effect of TRT may vary considerably depending on the etiology of low testosterone, the patient's age, and whether or not they have established CV [cardiovascular] disease,” the results suggest TRT may protect some men with hypogonadism from cardiovascular events, the investigators concluded.

Reference

George J, Ji X, Kattan M, et al. Testosterone replacement therapy for secondary hypogonadism and risk of myocardial infarction, stroke, or all-cause mortality. Abstract 906. Presented at: 26th Annual Scientific and Clinical Congress of the American Association for Clinical Endocrinologists. May 3-7, 2017; Austin, TX.