

Does Testosterone Therapy Confer Risk for Venous Thromboembolism?

In a case-crossover study, testosterone therapy was associated with excess risk.

Testosterone therapy can induce hematologic abnormalities associated with hypercoagulability, but whether it actually confers excess risk for venous thromboembolism (VTE; i.e., deep venous thrombosis or pulmonary embolism) is controversial. In this study, researchers used U.S. national pharmacy and medical claims databases to identify about 40,000 men (mean age, 57) with incident VTE and at least 12 months of data before VTE. Patients with cancer were excluded. About 4% of these men had received testosterone prescriptions during the year before their VTE events.

The design of the study was “case-crossover,” in which patients served as their own controls. When use of testosterone during the 6 months immediately preceding VTE (case period) was compared with use of testosterone during months 6 to 12 prior to VTE (the control period), testosterone therapy was associated significantly with development of VTE (odds ratio, ≈ 2.0). Outcomes were similar in patients with or without coded diagnoses of hypogonadism.

COMMENT

Medical claims and pharmacy data have many potential sources of error, including inaccuracy in capturing all hypogonadism diagnoses. This study emphasizes the proximate nature of testosterone therapy and incident VTE, not necessarily the absolute risk for VTE with or without testosterone therapy. — **Thomas L. Schwenk, MD**

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Walker RF et al. Association of testosterone therapy with risk of venous thromboembolism among men with and without hypogonadism. **JAMA Intern Med** 2019 Nov 11; [e-pub]. (<https://doi.org/10.1001/jamainternmed.2019.5135>)