Abstract

Testosterone therapy, thrombosis, thrombophilia, cardiovascular events.

Glueck CJ, Wang P.

Jewish Hospital Cholesterol, Metabolism, Thrombosis Center, Jewish Hospital of Cincinnati, Cincinnati, OH, USA.

BACKGROUND: There are similar time intervals between starting testosterone therapy (TT) and development of thrombotic (~4.5 months) or cardiovascular (CVD) events (~3 months) which may, speculatively, reflect a shared pathophysiology.

FINDINGS: We have described thrombotic events 5 months (median) after starting TT in 38 men and 4 women, including 27 with deep venous thrombosis-pulmonary embolism, 12 with osteonecrosis, 1 with central retinal vein thrombosis, 1 with amaurosis fugax, and 1 with spinal cord infarction. In 8 men whose TT was continued, second thrombotic events occurred despite adequate anticoagulation with Coumadin in 8 men, 3 of whom had a third thrombotic event. Of these 42 cases, 40 had measures of thrombophilia-hypofibrinolysis, and 39 were found to have previously undiagnosed thrombophilia-hypofibrinolysis. Before beginning TT, especially in men with previous history of thrombotic events, we suggest that, at a minimum, measurements be made for the Factor V Leiden and Prothrombin mutations, Factors VIII and XI, and homocysteine, to identify men who should not receive TT.

CONCLUSIONS: We need prospective data focused on whether there should be pre-TT screening based on history of previous venous thromboembolism or for all subjects for major gene thrombophilias. To better resolve questions about TT and all cause and cardiovascular morbidity and mortality and thrombosis, a long term, prospective, randomized, blinded study following the example of the Women's Health Initiative is needed. While we wait for prospective placebo-controlled TT outcome data, TT should be restricted to men with well-defined androgen deficiency syndromes.

PMID: 24930993