

Testosterone and erectile function and dysfunction

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Introduction: Erectile Dysfunction (ED) and hypogonadism are prevalent in patients with diabetes mellitus, metabolic syndrome, chronic renal failure, and aging. Objective: Evaluating the impact of testosterone on erectile function, veno-occlusive insufficiency and cavernosographic changes in hypogonadal ED patients.

Methods: 1) Review of literature on Testosterone therapy alone, and in combination with PDE-5 inhibitors in patients with ED. 2) Study review of Yassin and Saad: Changes in penile cavernography and venous leakage under testosterone therapy in hypogonadal patients with ED "Case Report". Int J of Andrology, Vol.28, Suppl.1, June 2005

Results: 1a) 50–60 % of hypogonadal ED patients reported restored erectile function sufficient for sexual intercourse after treatment with testosterone alone. 1b) About 63 % hypogonadal non-responders to PDE-5 inhibitors alone can be converted into responders within 10 to 12 weeks of combination with testosterone. 2) Treatment with long-acting testosterone undecanoate (Nebido®) improved sexual and erectile function in ED patients with veno-occlusive dysfunction with Diabetes or metabolic syndrome. Cavernosography showed dramatic improvement in many subjects within 3 months under Nebido®.

Conclusion: Testosterone plays a key role in the central and peripheral modulation of erectile function. New research in the laboratory and in humans is shaping a refinement of the role of testosterone therapy in ED. Testosterone deficiency induces both biological and structural/functional changes in the trabecular cavernosal tissues. Adipocyte accumulation in penile subtunical area of the corpus cavernosum in orchietomized rabbit emphasized the potential mechanism for veno-occlusive dysfunction in androgen deficiency (Traish et al 2005).