

Effects of Testosterone Administration Sexual Function in Aging Males with Symptoms of Late-Onset Hypogonadism and Normal or Subnormal Testosterone Level: A Comparative Analysis

Introduction and Objective: Although testosterone replacement can reverse many symptoms of androgen deficiency, the testosterone administration effects on sexual function of patients with normal testosterone level and clinical symptoms of hypogonadism have not been understood yet.

Aim: To further evaluate and compare the impact of testosterone administration on the sexual function of elderly men with sexual symptoms of late-onset hypogonadism (LOH) and normal or subnormal testosterone level.

Materials and Methods: In this prospective study, 48 married men with mean age (range) of 53.1 (40-75) years who suffered from sexual symptoms of LOH, particularly erectile dysfunction (ED), and did not previously respond to the 5 phosphodiesterase (PDE-5) inhibitors usage, were recruited and allocated into three age and body mass index matched study groups, based on their serum total testosterone (TT) levels; Group I: <3.5 ng/ml (n=19); Group II: 3.5-6 ng/ml (n=20) and Group III: >6 ng/ml (n=9). All patients received 250mg testosterone enanthate injection and followed up for 3 weeks. **Main Outcome Measures:** Sexual function domains including erectile function (EF), orgasmic function (OF), sexual desire (SD), intercourse satisfaction (IS) and overall satisfaction (OS) of participants were determined at screening visit and study end via the International Index of Erectile Function (IIEF) questionnaire. Serum TT, luteinizing hormone, prostate-specific antigen, fasting blood sugar and lipid profile were also measured.

Results: The mean duration of sexual dysfunction was 27.85 ± 19.41 months. Following treatment, the mean TT level increased significantly from 2.28 ng/ml to 3.39 ng/ml in group I, but decreased insignificantly in groups II and III. Compared with baseline sexual function, the subjects were more satisfied with their EF, OF, SD, IS and OS after receiving therapy. Improvement in EF was observed in 72.9% patients (68.4%, 80% and 66.7% for Groups I, II and III, respectively, $P < 0.001$).

Conclusion: This study suggests that in aging males with sexual symptoms of LOH who were non-responder to the PDE-5 inhibitors therapy, androgen administration, regardless of TT level, could improve sexual function domains, especially ED, in a short-term period.