

Obese hypogonadal men benefit from long-term testosterone treatment with testosterone undecanoate injections in multiple ways

A Haider, A Traish, G Doros, F Saad

Objective: Obesity and inflammation are recognised as risk factors for prostate diseases and LUTS [1-3]. This study analysed the effects of restoring normal testosterone (T) in obese hypogonadal men.

Material and Methods: Prospective registry study in 181 men (age: 59.11 ± 6.06 years) with T levels below 12.1 nmol/L and a body mass index (BMI) of ≥ 30 kg/m². They received parenteral T undecanoate 1000 mg/12 weeks following an initial 6-week interval for up to five years.

Results: Weight (kg) decreased from 114.71 ± 11.59 (87.0;139.00) to 93.24 ± 8.49 (80.0;115.0) ($p < 0.0001$). Mean change from baseline was 18.83 ± 0.36 kg or $16.41 \pm 0.3\%$. Waist circumference (cm) decreased from 111.2 ± 7.54 (89.00;129.00) to 100.47 ± 7.11 (84.00;117.00), BMI from 36.72 ± 3.72 (30.10;46.51) to 30.22 ± 2.6 (25.66;36.71) ($p < 0.0001$ for all). Residual bladder volume decreased from 51.37 ± 21.86 to 20.17 ± 6.37 ml. Prostate volume increased from 30.59 ± 11.35 to 32.05 ± 13.27 ml, PSA from 1.77 ± 0.93 to 1.94 ± 1 ng/ml. IPSS decreased from 7.62 ± 4.2 to 2.91 ± 1.27 , C-reactive protein from 4.03 ± 4.8 to 0.78 ± 1.51 mg/dl ($p < 0.0001$ for all). One patient was diagnosed with prostate cancer 10 months after treatment initiation. IIEF improved from 21.13 ± 4.59 to 25.31 ± 3.15 , the Aging Males' Symptoms scale (AMS) from 55.82 ± 9.94 to 17.35 ± 0.57 ($p < 0.0001$ for all). Systolic blood pressure dropped from 159.17 ± 15.9 to 139.08 ± 10.99 mmHg, diastolic blood pressure from 96.5 ± 11.01 to 80.39 ± 7.51 mmHg ($p < 0.0001$ for both).

Conclusions: Normalizing T in obese hypogonadal men produced weight loss and improvement in several factors of the metabolic syndrome. These effects may be beneficial not only for cardiometabolic risk but also for urological outcomes.

[1] De Nunzio, Eur Urol 2011;60:106-17

[2] De Nunzio., Eur Urol 2012;61:560-70

[3] Allott, Eur Urol 2013; 63: 800-809