

Most hypogonadal men are obese; long-term testosterone treatment leads to continuous and sustained reductions of body weight and waist circumference

F Saad^{1,2}, G Doros³, A Traish⁴, A Haider⁵

Global Medical Affairs Andrology, Bayer Pharma, Berlin, Germany

Gulf Medical University, Ajman, UAE

Biostatistics Consulting Group, Boston University, Boston, Mass, USA

Dpt of Biochemistry and Division of Urology, Boston University School of Medicine, Boston, Mass

Private Urology Practice, Bremerhaven, Germany

Introduction: Obesity is a disease which has more than doubled worldwide since 1980. Almost all healthcare professionals are exposed to obese patients because of their higher risk for morbidity and mortality. This study investigated the distribution of obesity and effects of testosterone replacement therapy (TRT) in an unselected cohort of hypogonadal men.

Methods: Open-label, single-center, cumulative, prospective registry study of 255 men (mean age 60.6 years), with testosterone levels between 5.89 –12.13 nmol/L (mean: 9.93 ± 1.38) receiving parenteral testosterone undecanoate for up to 5 years.

Results: At baseline, 13 patients (5.1%) had normal weight ($BMI \leq 24.9$ m/kg²). 61 (23.92%) were overweight, and 181 (70.98%) were obese ($BMI \geq 30$ m/kg²). 36 men (14.12%) were morbidly obese ($BMI \geq 40$ m/kg²). At baseline, 11 patients (4.31%) had a waist circumference < 94 cm, 70 (27.45%) 94-101.9 cm indicating an increased cardiovascular risk, and 174 (68.24%) ≥ 102 cm indicating a substantially increased cardiovascular risk.

After 5 years of testosterone treatment, weight (kg) decreased by 16.15 kg from 106.22 to 90.07. Waist circumference (cm) declined by 8.78 cm from 107.24 to 98.46. Both parameters showed a statistical significance ($p < 0.0001$ vs baseline and vs the previous year over 5 years) indicating continuous reductions. The mean per cent weight loss after 5 years was $13.21 \pm 7.24\%$.

95% of men had any weight loss, 90% lost ≥ 5 kg, 76% ≥ 10 kg, 53% ≥ 15 kg, 31% ≥ 20 kg. The 5% who gained exclusively belonged to the group with normal weight at baseline. 97% of men had any reduction in waist size, 86% lost ≥ 5 cm, 46% ≥ 10 cm, 7% ≥ 15 cm.

Conclusions: Normalizing testosterone produced progressive loss of weight, and waist circumference over the full 5 years of the study.