

Obese hypogonadal men with type 2 diabetes lose weight and achieve improved glycaemic control and sexual function when treated with testosterone undecanoate up to 6 years: A subgroup analysis from two observational registry studies

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Background: Obesity is a major risk factor for type 2 diabetes (T2D). Both obesity and T2D are risk factors for ED. We studied the effects of TRT in obese hypogonadal men with T2D on weight, glycaemic control and sexual function.

Methods: Cumulative, prospective, observational registry studies of 561 hypogonadal men from two urological centers. From these registries, we selected all men with obesity and T2D for subgroup analysis. All men received testosterone undecanoate injections for up to six years. All men were treated for their T2D by their respective family physician.

Results: 156 men (28% of all patients) met our criteria. Mean age was 61.2 ± 6.2 years at start of treatment.

Weight (kg) decreased from 113.56 ± 11.53 to 97.18 ± 9.04 . This decrease was statistically significant vs baseline ($p < 0.0001$) and each year compared to previous year. The model-adjusted mean change from baseline was -17.49 ± 0.58 kg. The mean per cent weight loss (%) was 15.04 ± 0.48 after 6 years.

Waist circumference (cm) declined from 114 ± 8.69 to 102.52 ± 7.93 . This was statistically significant vs baseline ($p < 0.0001$) and each year compared to the previous. The mean change from baseline was -11.56 ± 0.34 cm.

HbA_{1c} decreased from 8.08 ± 0.9 to $6.14 \pm 0.71\%$ ($p < 0.0001$ vs. baseline, significant for the first 5 years vs. previous year and approaching significance from year 6 to year 5 at $p = 0.0635$). The mean change from baseline was $-1.93 \pm 0.06\%$.

IIEF-EF increased from 13.95 ± 8.12 to 22.56 ± 5.96 . These changes were statistically significant during the first three years and maintained thereafter.

Conclusions: TRT with testosterone undecanoate injections in obese hypogonadal men with T2D resulted in significant and sustained improvements in weight, waist circumference, fasting glucose and HbA_{1c} and IIEF-EF over the full 6 years of the study.