

207 obese hypogonadal men treated with testosterone undecanoate up to 72 months progressively lose weight: an observational registry study

F Saad, A Haider, G Doros, A Traish

Maximum: 1850 characters

**Background:** Obesity may induce male hypogonadism at all ages by various mechanisms affecting the hypothalamic-pituitary-gonadal axis [1]. Low testosterone promotes further accumulation of fat mass thus creating a vicious circle. We analysed the effects of normalising testosterone in obese hypogonadal men.

**Methods:** Cumulative, prospective, observational registry study of 207 obese men with testosterone levels below 12.1 nmol/L and a body mass index (BMI) of  $\geq 30$  kg/m<sup>2</sup> received parenteral testosterone undecanoate 1000 mg/12 weeks following an initial 6-week interval for up to six years.

**Results:** At the end of the observation period, mean weight (kg) decreased from  $113.33 \pm 11.63$  to  $91.59 \pm 8.14$ . This decrease was statistically significant vs baseline ( $p < 0.0001$ ) and each year compared to previous year. The mean change from baseline was  $-20.68 \pm 0.4$  kg.

Mean waist circumference (cm) as a measure of abdominal fat decreased from  $110.57 \pm 7.3$  to  $99.35 \pm 7.11$ . This decline was statistically significant vs baseline ( $p < 0.0001$ ) and each year compared to the previous year except the last year where statistical significance was approached ( $p = 0.0564$ ). The mean change from baseline was  $-10.48 \pm 0.28$  cm.

BMI (kg/m<sup>2</sup>) decreased from  $36.3 \pm 3.69$  to  $29.69 \pm 2.6$ . This change was statistically significant vs baseline ( $p < 0.0001$ ) and each year compared to previous year.

The mean per cent weight loss (%) was  $5.39\% \pm 0.24$  after 1 year,  $9.41 \pm 0.25$  after 2 years,  $12.02 \pm 0.26$  after 3 years,  $14.39 \pm 0.26$  after 4 years,  $16.93 \pm 0.28$  after 5 years and  $18.15 \pm 0.33$  after 6 years.

**Conclusions:** Raising serum testosterone to normal resulted in loss of weight and waist circumference. Improvement in weight was progressive over the full 6 years of the study, improvement in waist circumference was progressive over 5 years and still approached significance at 6 compared to 5 years.

[1] Saboor Aftab et al. Clin Endocrinol 2013; 78: 330–337