

HYPERTENSION IN HYPOGONADAL MEN IMPROVES WITH LONG-TERM TREATMENT WITH TESTOSTERONE UNDECANOATE INJECTIONS (TU) IN COMPARISON TO UNTREATED HYPOGONADAL CONTROLS**F. Saad**^{1,2}, K. Haider³, A Haider³, G. Doros⁴, A. Traish⁵¹Medical Affairs Andrology, Bayer AG, Germany²Research Department, Gulf Medical University, United Arab Emirates³Urology and Andrology, Private Urology Practice, Germany⁴Epidemiology and Statistics, Boston University School of Public Health, USA⁵Urology and Biochemistry, Boston University School of Medicine, USA

Background: The prevalence of hypogonadism in men with hypertension is high and may be related to overweight and obesity. **Methods:** In a registry of hypogonadal men, 676 of 805 patients (84%) had hypertension (systolic blood pressure (SBP) ≥ 130 and/or diastolic blood pressure (DBP) ≥ 85 mmHg). 376 received testosterone therapy (TTh) with TU 1000 mg/12 weeks following an initial 6-week interval (T-group). 300 had opted against TTh and served as controls (CTRL). 10-year data are reported. Changes between groups were compared by mixed effects model for repeated measures with random effect for intercept and fixed effects for time, group and their interaction, and adjusted for confounders. **Results:** Mean (median) follow-up: T-group 7.7 ± 2.6 (9), CTRL 8.1 ± 2.1 (9) years. Baseline age: 58.5 ± 6.8 (T-group) and 63.8 ± 4.8 years (CTRL). 52.7% in T-group and 46.7% in CTRL used antihypertensives. In the T-group, SBP decreased by 23.6 ± 0.7 (p0.0001) and increased in CTRL by 7.7 ± 0.8 mmHg (p0.0001). DBP decreased in the T-group by 12.8 ± 0.7 (p0.0001) and increased in CTRL by 4.4 ± 0.9 mmHg (p0.0001). Heart rate decreased in the T-group by 1.6 ± 0.3 (p0.0001) and increased in CTRL by 1.2 ± 0 bpm (p0.005). Pulse pressure decreased in the T-group by 10.3 ± 0.7 (p0.0001) and increased in CTRL by 2.4 ± 0.9 mmHg (p0.01). **Adverse events:** T-group: 15 deaths (4%), no myocardial infarctions (MIs) or strokes. CTRL: 65 deaths (21.7%), 59 MIs (19.7%), 52 strokes (17.3%). **Conclusion:** Long-term TTh in hypogonadal men improved blood pressure, heart rate and arterial stiffness. In untreated controls, these parameters increased. Less major adverse cardiovascular events occurred in the T-group.

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