

Effects of 4 years' testosterone administration on the Aging Males' Symptoms scale and side-effects of long-term treatment

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Objective: The Aging Males' Symptoms scale (AMS) is a self-administered health-related quality-of-life (QoL) scale, designed, first, to assess symptoms of aging/QoL (independent from those disease-related) between groups of males; second, to evaluate the severity of symptoms/QoL over time, and, third, to measure changes pre- and post-androgen therapy. The AMS identifies three dimensions of symptoms/complaints, psychological, somato-vegetative, and sexual. In this study we tested the effects of testosterone (T) administration on AMS scores to men with lower-than-normal T. Safety of T administration was also assessed.

Materials and methods: 104 men, aged (18 – 83 years, mean 59.6 ± 8.0 years), with testosterone levels between $0.14 - 4.51$ ng/mL ($N > 4.90$ ng/ml) were treated with parenteral testosterone undecanoate for 4 year as the sole intervention.

Results: Plasma testosterone rose from 3.3 ± 1.9 ng/mL to 4.1 ± 1.5 ng/mL ($P < 0.01$) at 3 months, then stabilized at 6.8 ± 1.3 ng/mL after the first 6 months. AMS scores declined from 62.4 ± 6.1 to 26.9 ± 6.7 after 6 months and to 20.6 ± 2.3 after 12 months and 6 months later scores stabilized at 18.8 ± 1.3 . With regard to potential side effects. After 48 months: PSA had risen from 1.8 ± 0.9 to 2.3 ± 2.0 ng/ml; prostate volume from 31.5 ± 12.0 to 33.7 ± 12.1 ml. The International Prostate Symptoms Score had declined from 8.2 ± 3.8 to 3.6 ± 1.4 . Residual urine volume in the bladder had declined from 49.4 ± 20.2 to 23.2 ± 6.4 ml. Testicular volume declined over the first 12 months from 21.3 ± 3.2 to 20.3 ± 3.2 ml. After 12-18 months hemoglobin had risen from 14.2 ± 0.8 to 15.0 ± 0.6 g/dL and the hematocrit from 41.8 ± 3.1 to 48.1 ± 2.9 % whereafter no further rises were observed.

Conclusion: T administration to men with lower-than-normal serum T improves AMS scores significantly and fast. Side-effects of T are acceptable but monitoring is required. Certain urological symptoms even improved.