

## Editorial Comment

## Re: The treatment of late-onset hypogonadism

Hypogonadism has clearly been shown to influence sexual and multi-system function.<sup>[1-3]</sup> In this article,<sup>[4]</sup> the authors reviewed the negative effects of late-onset hypogonadism (LOH) on different systems and gave details on treatment of it. LOH that is defined by reduced serum testosterone levels associated with clinical symptoms at middle ages mainly seen after 40 years old. Testosterone, formerly known associated with sexual function, goes far beyond sexual function and is now considered a hormone with numerous effects on male physiology, in particular regarding metabolic functions.

It is well documented that testicular testosterone production decreases in men with ageing, by 1–2% per year.<sup>[5]</sup> However, on average serum levels of testosterone still remain within the normal range of young men. “Who should be offered testosterone replacement?”. There is still no general consensus on the threshold of circulating testosterone below which replacement therapy is recommended. The panelists for the Endocrine Society guideline failed to reach a consensus regarding the testosterone threshold for older men, as some of them favored a threshold of 9.7–10.4 nmol/L; whereas, others felt that a threshold of 6.9 nmol/L was more appropriate.<sup>[6]</sup> In case of dilemma, questionnaires like Aging Males’ Symptoms Questionnaire (AMS-Q), which has validated Turkish version, can be helpful.

Evidences support the concept that testosterone is an anabolic hormone with a wide range of beneficial effects on men’s health. The therapeutic role of testosterone in men’s health, however, remains a hotly debated issue for a number of reasons, including the purported risk of prostate cancer. As urologists, we always asked a critical question “Is there any existing relation between testosterone and the development of prostate pathology (prostate cancer and/or hyperplasia)?”. The answer

was given in a very recent review of current literature<sup>[7]</sup> regarding the relationship of serum testosterone on prostate cancer. The results dispelled the historical fear that raising testosterone levels will result in more prostate cancer. Studies have failed to show increased risk of prostate cancer in men with higher serum testosterone, and supraphysiological testosterone fails to increase prostate volume or prostate specific antigen in healthy men. This apparent paradox is explained by the “saturation model,” which posits a finite capacity of androgen to stimulate growth of prostate cancer. Modern studies indicate no increased risk of prostate cancer among men with serum testosterone in the therapeutic range.<sup>[7]</sup>

In conclusion, testosterone is not a “niche” hormone, but a multi system hormone with much wider range of actions than reproduction or sexual functions. Early recognition and treatment of patients with LOH might help reduce the likelihood that these aforementioned<sup>[4]</sup> clinical features progress.

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