



Treatment of PADAM Syndrome: An Educational Overview and Expert Opinion

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Abstract

Partial Androgen Deficiency in Aging Men (PADAM), also known as andropause, male climate, or late-onset hypogonadism, has been recognized since the 1950s. This article reviews the history, diagnosis, and treatment of PADAM syndrome, with a focus on recent therapeutic approaches, particularly human chorionic gonadotropin (HCG) therapy.

Keywords: PADAM Syndrome; Treatment

Introduction

The occurrence of climacteric symptoms in men has been documented as early as the 1950s under various terms, including andropause, male climate, and Partial Androgen Deficiency in Aging Male (PADAM) syndrome. The condition is characterized by a decline in testosterone levels and associated symptoms such as fatigue, reduced libido, and depression [1-3].

Historical Perspectives on PADAM

In 1982, Mastrogiamco et al. conducted a study on 145 men aged 60 to 91 years to explore the presence of hypogonadism. The study found that 46% of the participants had no signs of hypogonadism, with normal levels of Luteinizing Hormone (LH), testosterone, and 17-beta estradiol. About 15% had high LH with normal testosterone, while 22% had classical hypergonadotropic hypogonadism (high LH and low testosterone). A smaller group (16.5%) exhibited hypogonadotropic hypogonadism (low LH and low testosterone). Mastrogiamco concluded that, unlike female menopause, andropause is not an inevitable phenomenon [4].

In 1993, Vermeulen from Belgium raised concerns about the potential risks of androgen therapy in elderly men, suggesting that androgens could stimulate the growth of subclinical prostatic carcinoma. As a result, he recommended against the general use of androgen replacement therapy in this age group [5].

However, a 2004 study by Alvaro Morales and his Canadian research team provided a counterpoint, suggesting that androgen therapy could be used to maintain physiological testosterone levels, avoiding supra-physiological levels. They emphasized the importance of measuring prostate size and serum Prostate-Specific Antigen (PSA) levels before starting therapy [6].

Recent Developments in PADAM Treatment

In 2005, Tsujimura et al. from Japan reported the treatment of 21 patients (Age: Above 50 years) who had PADAM syndrome with HCG injections for three months to two years. Treatment was associated with marked increase in testosterone level and was not associated with adverse effect. They emphasized that testosterone therapy causes a rapid peak in serum testosterone followed by a gradual decline over two weeks, and long-term use could increase the risk of testicular atrophy. In contrast, HCG therapy did not carry the same risk, as it stimulates the testes to produce endogenous testosterone without negatively affecting testicular size [7].

Clinical Studies on Human Chorionic Gonadotropin (HCG)

In 2016, Sandro La Vignera and his team from Italy studied the effects of different treatments for late-onset hypogonadism, including testosterone replacement and HCG.

Their study included 40 patients, with 10 men in each of the following treatment groups: HCG, transdermal testosterone, testosterone undecanoate, and testosterone enanthate. The study found that HCG treatment was associated with significantly lower prostate volume, serum PSA

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levels, estrogens, and hematocrit compared to testosterone therapy. Additionally, HCG treatment led to higher serum 25-OH vitamin D levels and did not significantly reduce sperm density or the percentage of progressively motile sperm, which was a notable concern with testosterone therapy [8].

In 2006, Kalinchenko reported a study on 150 men with PADAM who were treated with HCG (1000-3000 units every 4 days) to stimulate endogenous testosterone production. This therapy was associated with positive outcomes in testosterone synthesis and overall health [3].

Emerging Research

In more recent studies, such as the work of Meier et al. from Australia, HCG treatment has been shown to stimulate osteoblastic collagen synthesis in older men with PADAM, a process not stimulated by dihydrotestosterone alone. This suggests that HCG may have additional benefits, particularly in improving bone health, which could be a critical aspect of managing PADAM symptoms in aging men [9].

Conclusion

The management of PADAM syndrome has evolved significantly over the past few decades. While testosterone replacement therapy remains a common treatment, recent studies highlight the potential advantages of HCG therapy, which appears to be safer in terms of prostate health and fertility preservation.

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