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Bioidentical Testosterone Replacement Via Subcutaneous Pellets in Perimenopause and Menopause: A Six-Year Clinical Observational Experience

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Abstract

Background: Perimenopause and menopause are associated with complex hormonal changes that affect physical, metabolic, sexual, and psychological health. While estrogen deficiency has been extensively studied, androgen decline—particularly testosterone—has gained increasing attention due to its role in female well-being.

Methods and Findings: This observational clinical study summarizes a six-year experience with bioidentical testosterone replacement therapy administered via subcutaneous pellets in women during perimenopause and menopause. Patients were followed clinically and outcomes included libido, energy levels, mood, body composition, and safety observations.

Conclusions: Bioidentical testosterone replacement via pellets appears to be a safe and effective therapeutic option for selected women when appropriately indicated and medically supervised.

Keywords

Perimenopause; Menopause; Testosterone; Bioidentical Hormone Therapy; Subcutaneous Pellets; Women's Health.

Introduction

Perimenopause and menopause represent critical transitional phases in a woman's life, characterized by progressive hormonal fluctuations and eventual ovarian insufficiency. Although estrogen deficiency has traditionally been the primary focus of menopausal management, increasing attention has been directed toward the role of androgens, particularly testosterone, in female physiology.

Testosterone contributes to sexual desire, energy metabolism, musculoskeletal integrity, cognitive performance, and emotional well-being. During perimenopause, androgen levels may decline earlier and more gradually than estrogen, leading to symptoms that frequently precede classic vasomotor manifestations. These symptoms include persistent fatigue, decreased libido, mood disturbances, reduced motivation, and diminished quality of life

Despite its physiological relevance, androgen deficiency in women remains underrecognized. Subcutaneous pellet therapy offers a sustained-release delivery system capable of providing stable serum hormone levels, improved adherence, and greater symptom control compared to other administration routes. Nevertheless, controversy persists due to limited long-term clinical data. This study aims to present a six-year observational clinical experience with bioidentical testosterone pellets in women during perimenopause and menopause.

Methods

This observational clinical study is based on six years of experience in a private medical practice in Madrid, Spain, specializing in longevity and hormonal optimization.

Participants included women aged 38 to 62 years presenting with symptoms consistent with androgen deficiency during perimenopause or menopause. Inclusion criteria comprised persistent fatigue, reduced libido, mood changes, and decreased sense of well-being not attributable to other medical conditions. Patients with active hormone-sensitive malignancies, severe psychiatric disorders, or uncontrolled systemic disease were excluded.

Bioidentical testosterone was administered via subcutaneous pellet implantation under sterile conditions. Dosage was individualized based on clinical presentation, age, body composition, and prior therapeutic response. Patients were followed at regular intervals with clinical evaluations focused on symptom evolution and potential adverse effects.

Given the observational nature of the study, outcomes were analyzed descriptively without inferential statistical testing.

Results

Throughout the six-year observation period, the majority of patients reported meaningful clinical improvement in at least one primary outcome measure. The most consistently reported benefits were enhanced libido and increased energy levels, followed by improvements in mood stability, stress tolerance, and overall sense of well-being.

Additional observations included subjective improvement in body composition, particularly maintenance of muscle tone and reduction in perceived sarcopenia. Patient adherence to therapy was high, and

satisfaction with the sustained-release nature of pellet therapy was frequently noted.

Adverse effects were uncommon and generally mild. The most frequently reported events included transient acne and mild local discomfort at the implantation site. No cases of voice deepening, significant hirsutism, or serious adverse events were observed during the follow-up period (Table 1).

Clinical Parameter	Observed Clinical Outcome	Safety Observations
Libido	Marked improvement in sexual desire and satisfaction	No serious adverse events
Energy/Fatigue	Increased vitality and reduced fatigue	Occasional mild acne
Mood/Well-being	Improved emotional balance and stress tolerance	No mood destabilization
Body Composition	Reported improvement in muscle tone and strength	No virilization observed

Table 1: Summary of Clinical Outcomes and Safety Observations.

Discussion

This six-year clinical observational experience supports the physiological relevance of testosterone in women during perimenopause and menopause. The improvements observed in libido, energy, and emotional well-being are consistent with existing literature describing the role of androgens in female health.

The strengths of this study include its real-world clinical setting and extended duration of follow-up. However, limitations must be acknowledged, including the absence of a control group, reliance on subjective symptom reporting, and the inherent constraints of observational study design.

Despite ongoing debate regarding androgen therapy in women, these findings suggest that bioidentical testosterone pellet therapy, when appropriately prescribed and monitored, may represent a valuable component of individualized hormonal management strategies. Future randomized controlled trials are required to further define optimal dosing, long-term safety, and standardized clinical indications.

Conclusions

Bioidentical testosterone replacement via subcutaneous pellets appears to be a safe and effective therapeutic option for selected women experiencing androgen-deficiency–related symptoms during perimenopause and menopause. This six-year clinical experience supports its potential role within a personalized and medically supervised hormonal approach.

Competing and conflicting interests

The author declares no competing or conflicting interests related to this study.

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