Brief Communication

Counselling for Testosterone Therapy in Mid Life Men

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Abstract

Testosterone is frequently used for the optimization of mid-life health. This therapy is effective and safe if accompanied by adequate counseling, before prescription, and during administration. In this opinion piece, we discuss the style and substance of medication counseling for testosterone therapy. The role and scope of counseling are highlighted, with a focus on screening, diagnosis, medication counseling, sexual counseling, and monitoring. This article should prove useful for all health care professionals.

Keywords: *Androgen, androgen deficiency, andropause, hormonal replacement therapy, medication counseling, sexual counseling, testosterone*

Introduction

Testosterone is indicated for the management of testosterone deficiency. While there are many etiologies of this dysfunction, the most common is age-related. Andropause, better known as (androgen deficiency in the aging male) presents with a wide variety of biomedical as well as psychosocial challenges. While some of these may be related to aging in general, others are specifically linked to a decline in testosterone levels.[1]

Metabolic disorders, such as diabetes, obesity, metabolic syndrome, obstructive sleep apnea; medical disorders such as anemia, chronic liver disease, chronic kidney disease, chronic lung disease, HIV/acquired immunodeficiency syndrome; endocrine disorders including osteoporosis, sarcopenia, pituitary disease; history of chronic corticosteroid use, anabolic androgenic substance abuse, antipsychotic/anticonvulsant therapy, gonadal radiation, and gonadal surgery can be associated with low testosterone levels.

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The Role of Counselling

Although various pharmacological options are available for the management of testosterone deficiency, and its associated comorbidities, counseling is an essential part of the management of andropause.[2] Counseling acts as a therapy in itself, as explained in the concept of therapeutic patient education. Counseling also improves understanding or acceptance of, and adherence to suggested therapy.[3] It improves satisfaction with treatment, enhances patient-physician bonding, and works as (value-added therapy).

The Scope of Counseling

Although the term counseling is defined as "the provision of professional assistance and guidance in

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resolving personal or psychological problems," it has a much broader connotation in medicine.[4] Medication counseling can be defined as the process of assessment of patient needs, preferences, and wishes; enhancing awareness, sharing of advice, allaying of concerns, and offering assistance as required, in relation to prescribed medication, to optimize acceptance of, and adherence to therapy. Medication counseling is an integral part of andropause management.[3,5]

Andropause counseling includes, and overlaps with, patient education, support, advocacy, and medication counseling. Table 1 lists the various facets of andropause counseling. Many of these facets are similar to those seen with other chronic diseases.[6] A few aspects of counseling, however, need specific attention, as they are specific to andropause. These are medication counseling for testosterone therapy and sexual counseling.

Screening and Diagnosis

Counseling begins simultaneously with screening. Though universal screening for testosterone deficiency is not recommended, assessment of testosterone adequacy should be done if symptoms, signs, or surrogate laboratory markers are suggestive.[7,8] While monitoring is ideally done by measuring testosterone levels at appropriate intervals, it should be supplemented with clinical interviewing. Libido, erectile function, hemoglobin, bone mineral density, lean body mass, and depressive symptoms can be used as clinical markers for screening as well as monitoring. Validated screening tools [Table 2] can be used for monitoring of symptomatic well-being as well.

Cost Benefit Ratio/Reality Check

Before starting therapy, the patient should be explained regarding expected benefits, limitations, and caveats of testosterone therapy. Unfounded concerns should be allayed. At the same time, the patient should be provided with a realistic idea of which symptoms, signs, and abnormalities he can expect benefit in. There is no link of testosterone therapy with venous thromboembolism. Its impact on cognitive function, glycemic control, energy level/quality of life, and lipid health/cardiovascular health is uncertain. One must always be watchful for the potential deleterious effects on polycythemia and spermatogenesis. Some contraindications are active prostatic carcinoma, acute coronary syndromes in the past 3–6 months, and heart failure NYHA Class IV.

Medication Counseling

Testosterone is the pillar of andropause management. Various preparations of testosterone are available:

Table 1: Domains of andropause counseling

Screening and diagnosis
Description of symptoms
Administration of questionnaire
Counseling for accurate for testosterone estimation
Pretherapeutic counseling
Assessment of contraindications
Explanation of expected benefits, possible side effects, anticipated limitations, and cost
Assistance with risk-benefit analysis
Choice of testosterone therapy
Sharing of available options: Lifestyle, testosterone, nonhormonal therapy
Explanation of route of administration, advantages, limitations, side effects, cost
Assessment of best possible option(s)
Choice of nonhormonal therapy
Clinical assessment of musculoskeletal metabolic, sexual, psychosocial comorbidities
Sharing therapeutic plan for mitigation of comorbidities
Assistance with cost-benefit analysis and reality check in terms of expected benefits
Monitoring
Clinical monitoring for symptomatic well being, potential adverse effects of overdosage, indicators of suboptimal dosage
Reminders for regular biochemical and imaging monitoring, as indicated
Troubleshooting in case of unexpected clinical situations
Support
Psychological confidence building
Marriage therapy/family therapy if needed
"Best buddy" feeling
Sexual counseling
Nonpharmacological assistance
Pharmacological therapy
Invasive/surgical management

Table 2: Questionnaires that may be used to kickstart a conversation, screen, and/or monitor testosterone deficiency

Aging male symptoms scale[9]
ANDROTEST[10]
ADAM[11]
qADAM[12]
MMAS[13]
HIS-Q[14]

ADAM: Androgen deficiency in the aging male, qADAM: Quantitative ADAM, MMAS: Massachusetts male aging study, HIS-Q: Hypogonadism impact of symptoms questionnaire

Some of these are listed in Table 3. These formulations differ in their route of administration, onset and duration of action, potency, and expected side effects or limitations.[15] Therefore, knowledge of the clinical pharmacology of various androgenic drugs can be utilized to craft a person-centered choice of therapy. This

knowledge forms the basis of the content of andropause counseling.

The British Society for Sexual Medicine guidelines on adult testosterone deficiency leave the choice of preparation to the patient.[16] Even for this, however, information equipoise is necessary to ensure the optimal choice of treatment modality. This can be done through detailed medication counseling. The Endocrine Society (2018) suggests patient preference, formulation pharmacokinetics, treatment burden, and cost as determinants of the choice of therapy.[7,17]

Prescription of injectable testosterone presumes the availability of qualified and experienced health-care professionals capable of administering the drug. This consideration is especially important while using testosterone undecanoate, which is injected as a 4 ml oily suspension. In case of difficulty, 2 ml of this drug can be injected into each buttock.[15]

Table 4 describes some important points which must be kept in mind while planning a person-centric testosterone therapy in andropause. Clinical response/ well-being, testosterone levels, hematocrit, prostate health, (prostate-specific antigen), digital rectal examination, and prostate ultrasonography may be used to monitor testosterone therapy at regular intervals.[8,15]

Although not related to andropause, it is pertinent to mention that transgender persons (transmen) also use testosterone as gender-affirmative therapy.[18] Such persons have special needs and must be handled in a gender-friendly manner. Transmen will require just 50%–75% of normal dosage to achieve masculinization and are more susceptible to side effects such as acne.

Sexual Counseling

Sexual dysfunction is the sine qua non of andropause, and sexual counseling, an integral part of andropause care. Reader-friendly guidance on how to elicit a sexual history, and the steps of sexual counseling are available.[19] Tables 5 and 6 describe the style as well as the content of sexual counseling. The man in andropause, who is usually in mid-life, will require more confidence building and support from the health-care professional. A greater emphasis on metabolic and

Table 3: Testosterone preparation in the Indian market

Route	Preparation	Dosage
Oral capsules	Testosterone undecanoate	40 mg 2-3 days
Percutaneous gel	Testosterone 1% gel	Once-daily
Intramuscular injection	Testosterone suspension	25-50 mg q7-14 days
	Testosterone esters 100/250	Q21-28 days
	Testosterone undecanoate 1000 mg	Q 90 days

Table 4: Person-specific choice of testosterone therapy

Person specific need	Preferred preparation
Biomedical	
Efficacy: Need for immediate resolution of symptoms	IM aqueous suspension; gel
Safety: Fear of side effects	Capsules, gel
Tolerability: Uncertainty about long term tolerance	Capsules, gel
Stability in testosterone levels	IM testosterone undecanoate
Psychosocial	
Intrusion: Need for lesser frequency of injections	IM testosterone undecanoate
Independence: Avoidance of dependence on health care professionals	Capsules, gel
Flexibility: Need to modulate serum levels for personal reasons	IM esters 100,250
Personal preference mode of administration	As per personal choice
Pragmatic	
Accessibility: To health care system for injection, monitoring	As per circumstance
Affordability: Of various preparations	As per cost
Availability: Of various formulations	As per local availability
Confidence of health-care professional	As per experience
Side effects	
Skin irritation	Avoid gels
Risk of transference to partner	Avoid gels
Pain on injection	Avoid 4 ml/2 ml injections
Fluctuation in mood/physical/sexual symptoms	Avoid testosterone esters

medical optimization, as opposed to focus limited to psychosocial support, maybe in order. Counseling of the man in andropause should also include explanation of cardiac-friendly and "musculo-skeletally non demanding" ways of achieving sexual satisfaction.[19]

Though fertility is rarely an issue in this age group, the health-care professional should enquire about the person's needs and wishes. One may suggest contraceptive measures or fertility augmenting treatment as deemed appropriate. Counseling should also include a discussion on the prevention of sexually transmitted diseases as well as genital tract infections, The need to maintain genital hygiene, especially in men on sodium-glucose co-transporter 2 inhibitors, should also be stressed.[20]

Summary

Testosterone is frequently used for the optimization of mid-life health. This therapy is effective and safe if accompanied by adequate counseling, before prescription, and during administration. This article provides a comprehensive overview of testosterone counseling, and should prove useful for all health-care professionals.

Table 5: Water approach to motivational interviewing in sexual counseling

W	Welcome warmly
A	Ask and assess
T	Tell truthfully
E	Explain with empathy
R	Reassurance and return

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Table 6: Nonverbal cues indicating sexual discomfort

Whole body
Moving away from counselor
Shifting chair backward
Repetitive movements
Fidgeting
Head and face
Frowning
Narrowing of eyes
Sweating/perspiration
Turning red in the face/ears
Upper limbs
Wringing of hands
Frequent touching of the face
Covering mouth with hands

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