Hypoactive Sexual Desire Disorder (HSDD)

Testosterone for Women with Hypoactive Sexual Desire Disorder: Where Are We Now?

Hormones such as testosterone (T), together with their precursors, metabolites and overall activity, are well recognized. 'T' is the main male hormone that play a great role in developing Puberty, Reproductive health, Fertility issue, as well as in management of Hypoactive Sexual Desire Disorder (HSDD).[1]

The HSDD disease is caused by multifactorial agents. Diagnosis is difficult as it is related to physiological, psychological, social shyness and taboo. Also due to ignorance of patients and health care givers.[2]

We the health provider do not give proper attention and as we do not know what is disease – HSDD ourselves, we most of the time "laugh away" patients complain. For this attitude the patient become depressed anxious, make herself self-centered, irritated and stopped all sexual activity, and misunderstanding arises between partner and even in family member. For the efficient management of this disorder, we should counsel our consultants, juniors, GP & our health care providers, about HSDD syndrome, its diagnosis & management.

An increase number of women will experience Menopause earlier because of (1) premature ovarian insufficiency, (2) from chromosomal abnormalities, (3) genetic defects, (4) associated with autoimmune disorders (5) metabolic disturbances, (6) environmental factors, (7) from pelvic radiation, (8) chemotherapy, (9) surgical oophorectomy with BRCA mutation.

In these cases circulating ovarian hormone levels of androgen & estrogen are abruptly decreased. Besides every day estimated 40% of women of all ages are entering in menopause stage as a result of hysterectomy with or without oophorectomy alone.

In 1930 'T' used for gynaecological disease eg. DUB, Myoma, Dysmenorrhoea, Chronic Mastitis, Uterine, Endometrial and Breast Carcinoma. In 1930 lossen & in 1943 salmon at al , 1st described a correlation between 'T' and female libido.[3] This hormone is not used in maximum countries because of negative apprehension of using male hormones to female individuals and maximum people do not perceive testosterone as an important female hormone. Among all countries of the world Australia has allowed its use.[4]

About 50% of all circulating 'T' is produced by peripheral conversion of namely hydroepiandrosterone and androstenedione. 'T' its precursors, metabolized together with vascular and reproductive hormone of women and synthesized in the body by ovarian and adrenal glands.[5]

5α (five alpha) DHEA (dehydroepiandrosterone) is most potent androgen & 'T' precursors are week hormone. Studies demonstrated that estrogen alone therapy in post menopausal women is associated with a small to moderate improvement in dyspearenia, but no effect on libido, sexual desire, interest, orgasm.[6]

We know that sexual response is due to multifactorial agents – physiological, social, psychological & psychosexual effect of hormones eg. Estrogen. Progesterone, Prolactin, Oxytocin, and Neurotransmitters, Neuropeptide including Nitric Acid, Dopamine, Serotonin, Gama Amino Butyric Acid – these take important active role in SHDD syndrome.[7]

DHEA is changed to DHEAS in adrenal glands & liver. DHEA level may be low during different time of the day, and rate of production of 'T' and other steroid hormones, declines as one aged. In women when menopause occur ovaries completely cease to produce sex hormones estrogen, progesterone.[8]

Structurally, estradiol and androstenediol more or less alike. DHEA in menopausal women does not decline. About 50% of all circulating 'T' is produced by peripheral conversion of hydroepiandrosterone and androstenediol.

There is controversy about use of 'T' & its derivates in management of HSDD and other disease disorder. It's new invention, so other study required.

'T' its precursors, metabolized together with vascular and reproductive hormones of women are synthesized in the body by ovarian and adrenal glands. Dehydro-epiandrosterone hormone known as androstenolone is an endogenous steroid hormone precursor. It is on of the most abundant circulating steroids in human. HDEA is produced in the gonads, & in the brain.

DHEAS helps with the development of male sexual characteristics at puberty and also responsible in reproduction for both sexes. DHEAS levels peak around puberty and then get lower as one ages.

The DHEA & DHEAS play an important role in development and maintenance and survival of the nervous system. In men testies continue to release hormones even in older age.

DHEAS route of administration is Transdermal, Maximum - effect of the treatment is seen after use of 12 weeks and continue (in selected case for 6-12 months). Do drug holiday by withdrawing the medicine, & see whether further treatment required. DHEA test done by using blood, saliva and urine.

SHDD is caused by multiple factors :

(1) From multiple medical diseases

(2) From surgical procedures.

(3) From lack of 'T' & its derivatives in the body.

(4) Before prescribing 'T' exclude all causes other then deficiency of 'T'.

(5) Treatment could be firstly tried with estrogen and its derivatives.

(6) Estrogen specially conjugated Equine Estrogen can reduce the efficacy of 'T' by increasing SGHB levels.

(7) Instead of oral route, transdermal estrogen give better results / effectiveness/ & less side effects.

Main function of 'T' is to maintains

(1) Libido or sex drive or desire

(2) Bone & muscle health

(3) Maintaining or boosting mood, energy.

(4) A mixture of treatment may work best, example are

(i) Counseling, (ii) life style changes, (iii) medicines.

(5) Androgen including 'T' are essential for development and maintenance of female sex anatomy, physiology and modulation of sexual behavior.

Pros & Cons of treatment

If 'T' level is excess in the body – there is excess hair in body, loss of scalp hair, acne, genital enlargement, decrease breast size.

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References:

1. Weiss RV, et al. Testosterone therapy for women with low sexual desire. PMC article. 2019.
2. Parish SJ, Kling JM. Testosterone use for hypoactive sexual desire disorder in postmenopausal women. *Menopause*. 2023; 30(7):781-783. doi:10.1097/GME.00000000 00002190.
3. Uloko M, et al. The clinical management of testosterone replacement: role in HSDD. *Nat Rev Endocrinol*. 2022.
4. Davis SR, et al. Efficacy and safety of testosterone in the management of female sexual dysfunction. 2012.
5. Stuenkel C, Traish A, Vignozzi L, et al. Global consensus position statement on the use of testosterone therapy for women. *J Sex Med*. 2021;18:849-867.
6. DHEA therapy for women: effect on sexual function and wellbeing. *Hum Reprod Update*. 2005.
7. Labrie F, Archer D, Bouchard C, et al. Intravaginal dehydroepiandrosterone (DHEA) and sexual function in postmenopausal women. *Menopause*. 2009;16(5):923-931.
8. The effects of dehydroepiandrosterone on sexual function: a review. 2017.