SEXUAL MEDICINE REVIEW

Evaluation and Management of Hypoactive Sexual Desire Disorder

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ABSTRACT

Introduction: Hypoactive sexual desire disorder (HSDD) often has a negative impact on the health and quality of life of women; however, many women do not mention—let alone discuss—this issue with their physicians. Providers of gynecologic services have the opportunity to address this subject with their patients.

Aim: To review the diagnosis and evidence-based treatment of low sexual desire in women with a focus on strategies that can be used efficiently and effectively in the clinic.

Methods: The Medline database was searched for clinically relevant publications on the diagnosis and management of HSDD.

Results: HSDD screening can be accomplished during an office visit with a few brief questions to determine whether further evaluation is warranted. Because women's sexual desire encompasses biological, psychological, social, and contextual components, a biopsychosocial approach to evaluating and treating patients with HSDD is recommended. Although individualized treatment plan development for patients requires independent medical judgment, a simple algorithm can assist in the screening, diagnosis, and management of HSDD. Once a diagnosis of HSDD has been made, interventions can begin with office-based counseling and progress to psychotherapy and/or pharmacotherapy. Flibanserin, a postsynaptic 5-hydroxytryptamine 1A agonist and 2A antagonist that decreases serotonin levels and increases dopamine and norepinephrine levels, is indicated for acquired, generalized HSDD in premenopausal women and is the only agent approved in the United States for the treatment of HSDD in women. Other strategies to treat HSDD include using medications indicated for other conditions (eg, transdermal testosterone, bupropion). Bremelanotide, a melanocortin receptor agonist, is in late-stage clinical development.

Conclusions: Providers of gynecologic care are uniquely positioned to screen, counsel, and refer patients with HSDD. Options for pharmacotherapy of HSDD are currently limited to flibanserin, approved by the US Food and Drug Administration, and off-label use of other agents. **Clayton AH, Kingsberg SA, Goldstein I. Evaluation and Management of Hypoactive Sexual Desire Disorder. Sex Med 2018;X:XXX–XXX.**

Key Words: Sexual Dysfunction; Hypoactive Sexual Desire Disorder; Flibanserin; Screening; Diagnosis; Drug Therapies

INTRODUCTION

Hypoactive sexual desire disorder (HSDD) is defined as a persistent or recurrent deficiency (or absence) of sexual fantasies and desire for sexual activity that causes marked distress or interpersonal difficulty not related to a medical or psychiatric condition or the use of a substance or medication.[1,2] The clinician also should take into account the context of the person's life (eg, severe relationship problems) when evaluating loss or absence of sexual desire.[1,3] HSDD is common in women but is often unaddressed or undertreated.[4] Large population-based studies have shown that approximately 36% to 39% of women report low sexual desire, with 8% to 10% meeting the primary diagnostic criteria for HSDD (low desire and associated distress).[5,6] Similarly, the prevalence of HSDD equaled 7.4% in a cohort of women who received routine medical care from 20 obstetrics and gynecology or primary care clinics.[7] In women, low sexual desire generally increases with age, whereas related distress decreases, resulting in a fairly steady prevalence of HSDD

Received July 24, 2017. Accepted January 21, 2018.

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https://doi.org/10.1016/j.esxm.2018.01.004

across the adult lifespan.[8] Consistent with this observation, a questionnaire-based cross-sectional study of 1,548 Australian women 65 to 79 years of age reported a prevalence of low sexual desire, sexually related personal distress, and HSDD of 88.0%, 15.5%, and 13.6%, respectively.[9]

Low sexual desire can have a substantial negative impact on women's health and quality of life.[10–13] However, surveys of women who self-reported low sexual desire and associated distress showed that up to 80% had not mentioned the issue to a health care provider, with at least 50% reporting that discomfort or embarrassment contributed to their unwillingness to seek treatment.[13,14] Providers who deliver gynecologic services are uniquely positioned to identify and address patients' concerns about sexual functioning. This discussion of the literature on diagnosis and evidence-based treatment of low sexual desire in women focuses on strategies that can be used efficiently and effectively in the clinic.

METHODS

The Medline database was searched using the terms ("screening" OR "diagnosis" OR "management" OR "treatment") AND ("hypoactive sexual desire disorder" OR "HSDD"). For this narrative review, selection of publications relevant to the clinical practice of gynecologic service providers was based on the authors' clinical and research expertise.

PATHOPHYSIOLOGY

Distressing low sexual desire can be attributed to a number of biological, psychological, social, and contextual components.[15–17] Although biomedical factors—such as altered hormones and neurotransmitters and their interactions, genetics, and medical and psychiatric conditions—can explain aspects of HSDD, it is important to understand the complexity of the female sexual response and how other factors can contribute to HSDD. These include psychological factors, such as boredom, situational stress, self-consciousness about body image, and distraction; and social and contextual factors that include cultural norms, familial teachings, and relationship considerations.

The neurochemical basis of HSDD has not been fully elucidated; however, it is currently understood that low sexual desire results from hypofunctional excitation, hyperfunctional inhibition, or a combination of the 2.[18,19] Sexual desire is believed to be regulated by neuromodulators (neurotransmitters and hormones) of excitatory pathways (eg, dopamine, norepinephrine, melanocortins, oxytocin) and inhibitory pathways (eg, serotonin, opioids, endocannabinoids; Figure 1).[17–19] Decreased neural activation of brain regions associated with sexual arousal (eg, medial orbitofrontal region and periaqueductal gray matter) and a lack of disinhibition of brain regions involved in cognitive processing (eg, left brain) in women with HSDD can impair vaginal vasocongestion and lubrication and perhaps decrease female orgasm.[20]

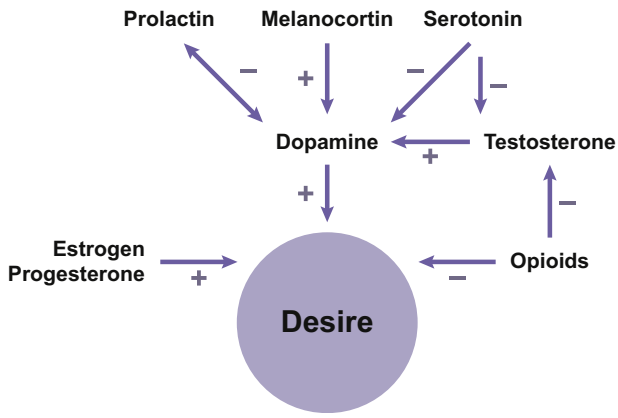

Figure 1. Excitatory and inhibitory effects of neurotransmitters and hormones on sexual desire. Figure adapted with permission from John Wiley & Sons, Inc, from Clayton AH. Int J Gynaecol Obstet 2010;110:7–11,[17] ©2010 International Federation of Gynecology and Obstetrics. Published by Elsevier Ireland Ltd. All rights reserved.

RECOGNITION AND DIAGNOSIS OF HSDD

The central features of HSDD are low sexual desire and associated distress. The *International Classification of Disease* (ICD-10 and its anticipated update, ICD-11) include a diagnostic code for HSDD (F52.0 in ICD-10) defining HSDD as an "absence or marked reduction in desire or motivation to engage in sexual activity as manifested by any of the following: 1) reduced or absent spontaneous desire (sexual thoughts or fantasies); 2) reduced or absent responsive desire to erotic cues and stimulation; or 3) inability to sustain desire or interest during sexual activity. The pattern is persistent or recurrent over a period of at least several months and occurs frequently, though may fluctuate in severity, and is not secondary to a sexual pain disorder. The symptoms are associated with clinically significant distress."[21] The International Society for the Study of Women's Sexual Health has a similar broad definition but also notes that HSDD is not situational in nature (ie, not secondary to physical and/or emotional abuse, dissatisfaction with the partner, or intrusion of life stressors that can be affected by psychological and/or lifestyle changes).[3,22] Before diagnosing HSDD, relationship issues (eg, significant relationship conflict) should be ruled out as a primary causative factor.[3]

Although the ICD system continues to include a diagnostic code for HSDD, the most recent update to the American Psychiatric Association diagnostic manual (*Diagnostic and Statistical Manual of Mental Disorders, 5th Edition*) merged HSDD and female sexual arousal disorder to create a new diagnostic category, "female sexual interest and arousal disorder" (FSIAD).[23] The new FSIAD diagnosis is controversial among experts in sexual medicine, in large part because of the lack of information on validity and clinical utility.[24] Different symptom patterns have been observed in women with HSDD and FSIAD, and using the new criteria could exclude from diagnosis (and therefore treatment) a large number of women with HSDD of moderate to