Female Sexual Dysfunction

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Introduction

Female sexual dysfunction (FSD) represents an enigmatic yet complex set of disorders in this millennia, wherein significant changes have been implemented in defining, categorizing and managing these conditions. FSD is best viewed through a biopsychosocial modelled approach that integrates the ever-changing scenarios that can affect a woman's health [1]. This includes a woman's psychological issues, interpersonal factors, her current health status and other sociocultural factors. Women's sexuality is highly complex and the association between various factors like society, family, relationship and health is strictly non-linear in nature [2]. A problem in any one of these areas can ultimately result in a sexual dysfunction. The aim of this chapter is to briefly overview the female sexual interest/arousal disorder and orgasmic disorder and also outline the management of the same. Female pain disorders now reclassified as the genito-pelvic pain disorder have been comprehensively reviewed separately in the textbook.

Nosological Reclassification

FSDs were reclassified in the DSM-5 manual [3]. The categories of hypoactive sexual desire disorder (HSDD) were merged with the categories of female sexual arousal disorder (FSAD) and were renamed as a single entity as female sexual interest/arousal disorder (FSIAD) [3]. The separate diagnosis of dyspareunia and vaginismus was merged into a single category called the genito-pelvic pain disorder.

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Sexual aversion disorder has been removed due to lack of data supporting its existence. Lastly a criterion for frequency and severity was also introduced [4].

Both DSM-4 and DSM-5 have major limitations in the sense that they suffer from a high degree of false negatives [5]. Both the old and new classification systems significantly fail to identify all patients presenting with a sexual dysfunction. Lumping two separate diagnostic categories into one single category only serves to further reduce the specificity and/or precision of the classification [5]. Moreover the DSM-4 criteria were based on the linear model of the human sexual response cycle, which in itself is a limitation [6]. We know for a fact that not all individuals fit into the linear model of the sexual response cycle as proposed by Masters and Johnson [7].

Furthermore experts in field of sexual medicine explicitly state that criterion change was not supported by field trials. In an interesting study, which was a survey done via phone interviews it was found that over 92% of female respondents who had a sexual problem did not fit the DSM-5 diagnosis, and over 75% of respondents did not fit the DSM-4 diagnosis as well [8]. The clinical criteria that require the dysfunction to be present for a period of 4–6 months and in over 75–100% of encounters further lowered the number of respondents who would fit in a diagnosis. Those in support of the nosology change state that women cannot distinguish between subjective arousal and genital arousal and thus the unification of the categories is justified [9]. No consensus in general has been made about the DSM-5 revised classification [10].

Key Points in Diagnosing an FSD

Studies have suggested that FSD can be present anywhere between 19 and 50% of outpatient population [11–14]. Physician chart notes on the other hand point to a 2% incidence [13]. Part reason for this discrepancy can stem from a lack of clinical training in this field. Patients also seldom report their problems with sexual intercourse until or unless they are given explicit permission. In a recent observational study on 819 oncology patients, only 29% of them had ever asked their oncology consultant about sex [15]. In the PRESIDE study that involved 50,000 US women of whom 63% were respondents, HSDD was found to be 8.9% in the age group of 18–44 years [16]. In another Finnish study, 70–80% of women in the age group of 55–75 years reported a decrease in sexual desire [17]. Regardless of the varying epidemiological data, sexual desire disorders seem to be the most commonly reported FSD.

The proper diagnosis of an FSD requires the clinician to take a thorough history about the patient's medical and/or gynaecological conditions combined with a psychosexual assessment. Use of validated questionnaires can ease history taking and allay anxiety among patients. The questionnaires can be given to the patient before the actual clinical consultation and/or exam. Different questionnaires like the Female Sexual Function Index (FSFI) [18], the Sexual Function Questionnaires (SFQ) [19], and the Sexual Function and Satisfaction Brief Profile measure (PROMIS) [20] are well validated in terms of assessing sexual desire,

arousal (subjective and genital), and/or orgasm. The problem with using these questionnaires though arises when dealing with geographies where sexual literacy is poor and/or language is a barrier. In general, although these questionnaires have demonstrated psychometric validity, these questionnaires are no substitute for an in-depth sexual history taking.

When diagnosing a sexual dysfunction, questions directed to the patient should be non-judgemental and direct. Identifying the patient's sexual orientation and gender identity is the first step in the workup of an FSD. The onset of an FSD, its duration and context of occurrence, i.e. situational or global, should be elicited. A situational FSD is a dysfunction that occurs with a specific partner and/or circumstance. A global FSD on the other hand occurs with all partners/circumstance. FSDs are frequently interdependent in nature; for example a woman may complain of decreased desire secondary to pain during intercourse. The clinician should not treat the desire but should treat the pain that led to the decreased desire [21].

Sometimes, it is wise to ask the patient on 'what motivates her to take the treatment'. A woman's motivational factor for sex can help guide appropriate treatment. For example, some women may complain of decreased desire and when questioned they may reveal that they want to engage in more sex for their partners' sake [22]. Some others may state that they want to feel close to their partner. Either way, the motivational component can help the clinician tailor individual treatment strategies for the patient based on her goals.

Another commonly asked question in the assessment of an FSD is 'what she thinks is causing the problem'. This may reveal important information such as a fear of pain during penetration or lack of partner intimacy non-sexually that is making her avoid and/or lose interest in sexual intercourse.

Female Sexual Interest/Arousal Disorder

Due to the limited data on FSIAD and due to the lack of peer-reviewed validated studies on prevalence and clinical interventions, this diagnosis in itself has not much clinical applicability [23]. For the sake of better understanding we have listed all the possible organic and psychosocial factors that can affect a woman's sexual interest and/or desire in Table 6.1. The clinician should do a thorough assessment that involves history taking combined with a sexological gynaecological physical exam. The exam should involve both a mono-manual and bimanual palpation. In general limited blood tests are recommended for sexual arousal and interest disorders and there is no uniform prescribed testing criteria. Interpersonal factors as outlined in Table 6.1 are highly crucial in identifying a possible aetiology to the FSD [24]. Sexual abuse and partner conflicts impair desire. A death of loved one, domestic misunderstanding and/or financial problems along with religious taboos/beliefs can also affect a woman's desire and concomitantly her arousal. Numerous medications like antidepressants, antipsychotic medications, antilipid drugs and oral contraceptives can also significantly impair desire and arousal and their usage should be ruled out with an in-depth clinical history [24].

Table 6.1 Various gynaecological, interpersonal factors and drugs associated with FSAID

FSIAD-associated conditions
Gynaecological conditions
Pregnancy
Childbirth
Infertility
Menopause
Hysterectomy
Cervical malignancy
Breast surgery
Imperforate hymen
Vaginal septum
Lichen sclerosus and lichen planus
Interstitial cystitis
Pelvic organ prolapse
HPV infections
Fistulas
Candidal yeast infections
Vaginal atrophy
Vulvodynia
Endometriosis
Pelvic inflammatory disease
Hemorrhoids
Chronic pelvic pain
Vaginitis
Interpersonal factors
Religious beliefs
Past history of sexual abuse
Partner conflicts
Sexual orientation
Other conflicting relationships
Financial stressors
Family stress
Depression/anxiety and other mental illnesses
Medications
Antihypertensives
Antipsychotics
Antilipids
Barbiturates
Benzodiazepines
SSRI
OCPs
Danazol
Other hormonal preparations
Beta-blockers

Menopause that occurs with increasing age can also hinder desire and/or arousal. However what is striking is that the 'distress' over the sexual dysfunction also decreases as age advances. With increasing age, especially between 40s and 80s the attrition of relationships and partners and poor erectile function in the partner are all different contributory factors to decreased desire/arousal during partnered intercourse [25].

Some questions that can be used to assess desire/arousal disorders during a clinical evaluation are as follows:

1. How long have this problem been bothering you?
2. How often do you think of sex? How has it changed since the occurrence of the problem?
3. Out of ten, how many times do you initiate partnered sex? How has this changed since the problem?
4. Do you masturbate frequently?
5. What turns you on? Reading erotica? Sex scenes in movies? Anything specific?
6. During intercourse do you experience intense mental pleasure?
7. Do you have any pain during sex?
8. How has your relationship changed since the problem?
9. Why do you think you have this problem?
10. How frequently do you achieve an orgasm?
11. How do you think this treatment will help you?
12. What would it mean to you if this problem goes away?

Female Orgasmic Disorder

A female orgasmic disorder (FOD) is defined as the inability and/or difficulty of the individual to experience an orgasm during partnered sex. A study on 866 women suggested that an FOD is experienced by over 48% of the time in at least 50% of all sexual encounters. Interestingly, over 50% of participants voiced difficulties with arousal and about 57% suffered from distress [26]. A diagnosis of FOD is not made when symptoms occur due to usage of certain medications like SSRIs and other psychotropic drugs or when there is another mental disorder, interpersonal distress and/or any other medical condition that could have a contributory role to play in causing the symptom [24].

Female orgasms have always been a difficult entity to operationally define. 'Clitoral orgasm' is different from 'vaginal orgasm' [27]. A majority of women are capable of experiencing an orgasm during clitoral stimulation with masturbation but not during vaginal intercourse. An FOD diagnosis is given to women only when they are unable to experience orgasm during both clitoral and vaginal intercourse [24].

Women with primary anorgasmia are defined to have never experienced an orgasm even once in their lifetime. They tend to be of a younger age and less sexually experienced. Poor socioeconomic factors, restrictive beliefs and anxiety disorders are all associated with lesser frequency of experiencing an orgasm and these should be systematically ruled out by the clinician [28]. On the other end of spectrum studies have suggested that women can experience orgasm even in their sleep [29] and even after a spinal cord injury [30].

Management of FSD

Female Sexual Arousal/Interest Disorders

Treatment of desire/arousal disorders can be broadly categorized into psychotherapeutic (loosely called behavioural or cognitive) techniques or medical management with hormonal and non-hormonal therapy. Psychoeducation is probably the first step in the managing of all FSDs [31]. Educating the distressed patient and her partner about the normal sexual anatomy/physiology call help allay misconceptions and wrong beliefs.

Directed masturbation or masturbation training can be done for patients, where in a series of steps the patient explores different parts of her body that arouses her and allows her to reach orgasm [32]. Multiple RCTs support the use of masturbation training in the management of FSD [33]. Other treatment strategies used include the implementation of sensate focus exercises, coital alignment techniques and use of erotica and vibrators [34]. Recent studies have suggested that use of vibrators is associated with greater sexual satisfaction among couples despite the claimed fears that women may become dependent on it to reach orgasm [35].

A Cochrane review on the use of combined oestrogens and progestogens in peri- and postmenopausal women to improve sexual function found a small-to-moderate benefit [36]. Androgens have been linked with desire disorders and anecdotal evidence suggests that androgens are safe in postmenopausal women. Although not FDA approved, androgens are used off label for treating sexual desire disorders. Among all preparations, transdermal testosterone combined with oestrogens seems to have some clinical benefits in postmenopausal women. Dosing recommendation has not yet been standardized through trials though. When on testosterone therapy monitoring of testosterone levels, liver function tests, lipids and symptoms of androgenization is recommended [37].

Ospemifene is a 19-nortestosterone derivative and a selective oestrogen receptor modulator (SERM). This drug has received clearance for use in genito-pelvic pain syndrome. In a 12-week RCT, daily 60 mg of ospemifene was found to improve domains of desire, arousal and pain significantly [38].

Flibanserin is non-hormonal medication approved for the treatment of desire disorders. It acts by agonistic action on 5HT1A receptors while simultaneously antagonizing 5HT2A receptors. At a daily dose of 100 mg bedtime, flibanserin was found to significantly improve desire symptoms after 24 weeks compared to placebo and

also concomitantly reduce distress. No serious adverse effects or withdrawal symptoms were reported after discontinuing the medication [39].

PDE-5 inhibitors have been used empirically in treating sexual arousal disorders. Data on efficacy however is conflicting [40]. The biggest hurdle seems to be the discordance between subjective and genital arousal. While numerous studies on heterogeneous population of women report genital response after 50 or 100 mg sildenafil dosing, a subjective sense of pleasure was not elicited by the drug [41, 42].

Nutritional supplements like L-arginine, ginseng and damiana have been evaluated in women with sexual desire/arousal disorders and in one study on 108 women after 4 weeks of therapy over 72% of participants reported increased desire/arousal and satisfaction with sexual relationship [43].

Female Orgasmic Disorder

Treatment options for FOD seem highly limited. Most of the previous discussion on desire and arousal management would work with an aim to increase arousal and thus help the women reach orgasm. However in some women with primary anorgasmia where desire and arousal is not a problem, intranasal oxytocin may be tried although much larger clinical studies are required to confirm efficacy [44, 45]. Eros, a wearable clitoral suction device, has received FDA approval and can be tried to improve the ability of a woman to reach orgasm [24]. Other management options include the use of sensate focus, psychoeducation, bibliotherapy and mindfulness-based exercises.

Conclusion

Female sexual dysfunction is complex in the sense numerous physical, hormonal and other known/unknown psychosexual factors interplay among another in causing the dysfunction. Current classification systems are also not robust enough to completely encompass to a wide spectrum of reported sexual dysfunctions. The clinician should thus use his/her clinical acumen in properly diagnosing and assessing a symptom before branding the patient with a sexual dysfunction. This is possible with simple yet effective clinical history taking and focussed physical examination. The clinician should also remember the interpersonal factors that contribute to a dysfunction. Where possible the treating clinician should combine behavioural treatment strategies along with medical therapy for managing an FSD.

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