Review Article

Female sexual dysfunction: A potential minefield

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Abstract

Female sexual dysfunction (FSD) is a much-neglected aspect of feminine health, especially in patriarchal cultures. We collated data from pertinent published literature on FSD to explore the types, associations, and best possible approach to FSD in the Indian context. We fed search words "female sexual dysfunction," "sexual health," "India," into medical search engines such as PubMed, Google Scholar, Clinical Key, ProQuest, SciVal for locating pertinent articles from which data was synthesized and extracted. Female sexual response is complex and is influenced by physiological, behavioral, social, and cultural factors. The latest Diagnostic and Statistical Manual of Mental Disorders-5 criteria classified FSD into female sexual interest/arousal disorder, female orgasmic disorder and genito-pelvic pain/penetration disorder, along with categories common to both genders like substance/drug induced and other unspecified subsets. Diagnosis requires detailed and specific history taking and clinical evaluation to rule out comorbidities. Treatment is multifaceted and prolonged, involving pharmacological, psychological, and behavioral therapy in both partners. Almost all Indian studies in this field have small sample sizes and none of the studies focused on FSD as the primary complaint. FSD is still an unexplored field of Indian medicine. Although newer treatment options and techniques are being explored, there is much to achieve. We need to develop culturally suitable questionnaires taking into account the Indian female psyche. Management should be holistic and involve focused liaison clinics, including dermatology, gynecology, psychiatry, clinical psychology, and urology specialties.

Key words: Aversion, female sexual dysfunction, orgasm, sexual health, vaginismus, vulvodynia

Introduction

Female sexual health is a much-neglected aspect of the overall well-being of women, especially in patriarchal cultures. In addition to physiological factors, emotional, physical, and social aspects also play a role in maintaining sexual health. Although under-reported, female sexual dysfunction (FSD) is very prevalent and involves a complex interplay of psychosocial and physiological factors.

In this article, we attempt to discuss FSD and explore the various causes and treatment options available suitable to the Indian cultural context.

Methodology

We collated and extracted data on FSD worldwide after putting in the search words, "female sexual dysfunction," "sexual health" into various medical search engines.

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Discussion

Female sexual response

Female sexual response has various phases [Table 1], which are affected by emotional, neurovascular, endocrine, and psychosocial responses, all of which overlap[1] [Figure 1]. Female arousal and orgasm depend more on cognitive, emotional, and behavioral aspects, as opposed to male arousal, which is more physiological.[2]

Epidemiology

It is difficult to establish the exact incidence or prevalence of FSD. The most common age group to be affected is 51–59 years, i.e., perimenopausal. It may be associated with lower educational status, interpersonal conflict with partner, comorbidity such as diabetes mellitus, hypertension, and vulvar inflammatory diseases.

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Table 1: Phases of female sexual response

Phase	Physiological changes
Excitement	Increased cardiac and respiratory rates, genital and facial vasocongestion contraction of vulvovaginal and perineal muscles Increased mucin production from perineal glands
Plateau	Above changes persist
Orgasm	Culmination of repeated involuntary perineal muscle contractions
Resolution	Muscle relaxation, body slowly returns to baseline from excited state

There is no refractory phase in women, and they can experience repeated and multiple orgasms if sufficiently stimulated, These phases may be non-orderly and incomplete.

Classification

The latest Diagnostic and Statistical Manual of Mental Disorders (DSM) criteria, DSM-5 classification of FSD[3,4] include major types being include female orgasmic disorder, female sexual interest/arousal disorder and genito-pelvic pain/penetration disorder. Categories common to both genders include substance/drug induced and other unspecified subsets [Table 2].

Clinical Presentations

Symptoms may overlap between types.

Female orgasmic disorder

Here, sexual arousal/excitement is normal, but orgasm is absent, reduced, or significantly delayed on any type of stimulation, leading to mental distress. This often coexists with other forms. Women experiencing pain or low sexual arousal usually find it difficult to achieve orgasm. Orgasmic dysfunction increases with age.

Female sexual interest/arousal disorder

There is reduced or absent sexual drive, which leads to psychological stress and decreased quality of life. This is greater in women after surgical menopause.

Various contributory factors include lack of:[5]

- Sexual drive (biological component) refers to lack of natural desire for sex and is dependent on hormones such as estrogen, progesterone, dopamine, melanocortin, etc., or changes in the hypothalamus or limbic system of the brain
- Motivation (the cognitive component): There is no interest in indulging in any sexual activity, including masturbation, sexual fantasies, or thoughts. The reasons include low self-esteem, intervening thoughts, guilt, lack of emotional intimacy, workplace, financial or emotional stress, changes in body shape, associated psychiatric disorders, fear of venereal diseases, fear of partner's premature or delayed ejaculation, or previous failure to achieve orgasm, pregnancy, lactation, and alcoholism
- Responsiveness to sexual stimuli (response component): there is no positive response toward their partner's initiation and there are thoughts of avoiding sexual intercourse.

Nonsexual distractions include mood instability, work/family pressure, low self-esteem, religious upbringing, anxiety, emotional instability, or depression.

Sexual arousal disorder is further classified into various types[5] [Table 3].

Genitopelvic pain/penetration disorders

Here, pain or physical discomfort is the major component.

Dyspareunia

Persistent or recurrent pain occurs on attempted penovaginal insertion, or penetration, or even with movements during intercourse. Severity depends on

Table 2: Classification of female sexual dysfunction

Disorder	Definition
Specific to females	
Female orgasmic disorder	Marked delay in, marked infrequency of, or absence of orgasm or markedly reduced intensity of orgasmic sensations experienced on almost all (approximately 75%) or all occasions of sexual activity (in identified situational contexts or, if generalized, all the contexts)
Female sexual interest/arousal disorder	Lack of, or significantly reduced, sexual interest/arousal in least three of the following Absent/reduced interest in sexual activity Absent/reduced sexual/erotic thoughts or fantasies No/reduced initiation of sexual activity, and unreceptive to a partner's attempts to initiate Absent/reduced sexual excitement/pleasure during sexual activity in almost all situations No/reduced sexual interest in response to any internal or external sexual/erotic cues (e.g., written, verbal, visual) Absent/reduced genital or nongenital sensations during sexual activity in almost all situations
Genitopelvic pain/penetration disorder	Persistent or recurrent difficulties with one (or more) of the following Vaginal penetration during intercourse Marked vulvovaginal or pelvic pain during vaginal intercourse or penetration attempts Marked fear or anxiety about vulvovaginal or pelvic pain in anticipation of, during, or as a result of vaginal penetration Marked tensing or tightening of the pelvic floor muscles during attempted vaginal penetration
Common to both genders	
Substance/medication induced sexual dysfunction	Significant sexual dysfunction as per clinical examination There is evidence from the history, physical examination, or laboratory findings of both Development of symptoms during or soon after substance intoxication or after consumption or withdrawal of a medication The same substance or medicine is capable of producing similar symptoms Those symptoms are not explained by any etiology other than substance/medicine induced Symptoms presented only after substance/medicine consumption Symptoms reduce postcessation of the drugs No sexual comorbidity The disturbance does not occur exclusively during the course of a delirium. Significant distress present in the individual Drugs responsible: Antibiotics: Alter the ecology of the vagina and the vaginal flora, predisposing to inflammation and pain/pruritus Oral contraceptive pills - lead to hormonal changes predisposing to vulvodynia Psychotropic medication and antidepressants - reduce libido and arousal Analgesics - morphine, tramadol Antihistaminics - cetirizine, loratidine Cardiovascular drugs - amiodarone, clonidine, digoxin, gemfibrozil, methyl dopa, spironolactone Miscellaneous - amphetamine, dextroamphetamine, gabapentine, GNRH agonists, indomethacin, ketoconazole, phenytoin, topiramate Modified from: Conaglen HM, Conaglen JV. Drug-induced sexual dysfunction in men and women. Aust Prescr 2013;36: 42-5
Other specified sexual disorders	there is distress, but all criteria of above categories are not fulfilled

Contd...

Table 2: Contd...

Disorder	Definition
Unspecified sexual dysfunction	Significant distress occurs, but presentations lack sufficient information to be categorized as a specific diagnosis

The symptoms have persisted for a minimum duration of approximately 6 months and cause clinically significant distress in the individual, and the sexual dysfunction is not better explained by a nonsexual mental disorder or as a consequence of severe relationship distress or other significant stressors and is not attributable to the effects of a substance/medication or another medical condition. Along with these broad categories, DSM 5 has included the following subcriteria common to all disorders. Specify whether: Lifelong: the disturbance has been present since the individual became sexually active, Acquired: The disturbance began after a period of relatively normal sexual function. Specify whether: Generalized: Not limited to certain types of stimulation, situations, or partners, Situational: Only occurs with certain types of stimulation, situations, or partners. Specify if: Never experienced an orgasm under any situation. Specify current severity: Mild: Evidence of mild distress over the symptoms in criterion, Moderate: Evidence of moderate distress over the symptoms in criterion, Severe: Evidence of severe or extreme distress over the symptoms in criterion. Credit: "(DSM-5), Criteria for Female Sexual Dysfunction." DSM-5=Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, GnRH=Gonadotrophin Releasing Hormone

Table 3: Female sexual interest/arousal disorder - subtypes

S. No	Types	Description
I	Subjective sexual arousal disorder	There is physical arousal in the form of genital congestion and lubrication, but there is no emotional excitement or pleasure
II	Genital arousal disorder	There is no physical arousal even on direct genital stimulation, but subjective or emotional arousal occurs on being pleasured or pleasuring her partner, watching or reading erotica, etc.
III	Combined subjective and genital disorder	Both physical and emotional components are affected
IV	Persistent sexual arousal disorder	Unprompted, unwanted, and intrusive genital arousal (titillating, pounding, pulsations) occurs without any sexual desire or interest. It is undiminished by orgasms and continues for hours or days and maybe considered unpleasant
V	Sexual aversion disorder	Extreme apprehension and aversion occur at thought or initiation of any sexual activity. This may have underlying roots in childhood abuse, trauma or penetration/pain disorder

woman's pain threshold and partner's persistence. It has underlying organic or psychological causes.

Vaginismus

There is involuntary, reflex contraction of the pelvic, abdominal, back, and leg muscles along with thigh adduction and is associated with fear of pain on attempted entry of penis, tampon, speculum, or even digit into the vagina. The difficulties persist despite the woman's willingness for intercourse. It usually exhibits at first sexual intercourse. Such women enjoy nonpenetrative sexual stimulation, but reflex perineal tightening starts when penetration is initiated. This can cause severe distress to both partners. Structural abnormalities of the pelvic floor and vagina must be ruled out before labeling a case as vaginismus.

Vulvodynia

It is defined as "vulvar pain without a clear identifiable cause, which lasts for >3 months, and may have potential precipitating or correlating factors," and is a subset of mucocutaneous pain syndrome/atypical pain syndrome. It can be localized (vestibulodynia, clitorodynia, hemi vulvodynia), generalized or mixed and can be primary or secondary in onset. It may occur spontaneously or be provoked by contact or intercourse. Pain may be persistent, intermittent, immediate, or delayed contact. Vestibulodynia is the most common and may be associated with imperceptible to mild erythema.[6]

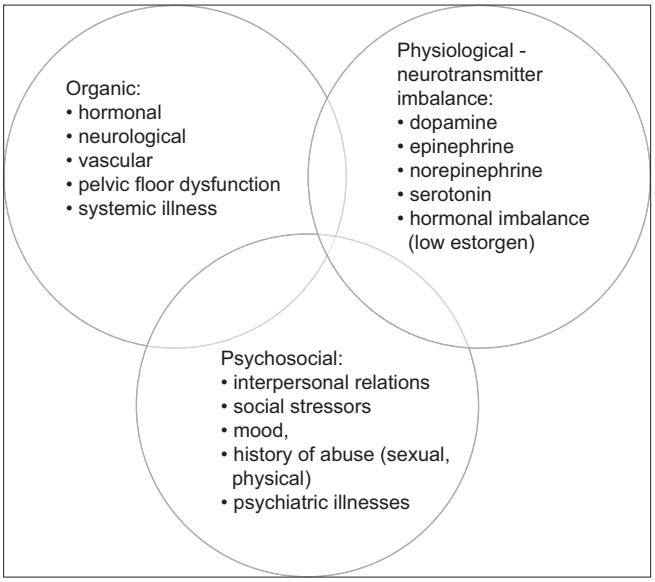

Figure 1: Pathophyisology of female sexual dysfunction

Various causes include inflammation of vulva or vestibule following dermatitis, infections like candidiasis, herpes simplex and zoster, trichomoniasis, neoplasia, systemic illnesses such as systemic lupus erythematosus, Sjogren's syndrome, Crohn's disease, Behcet's disease, hormonal changes, neurological diseases or injury or pelvic trauma, and loss of pelvic muscle tone.

Pelvic organ prolapse and urinary incontinence may precipitate FSD of any kind.[7]

Indian Scenario

There are small-scale questionnaire-based studies sporadically reported in Indian literature; none are based on self-reporting by females. One study found FSD to occur at an earlier age and more frequently in women with depression.[8] One of the earliest studies states that "frigidity was found to be associated with sexual ignorance, marital strife, fear of pregnancy, and tiredness."[9] Another south Indian study reported orgasmic dysfunction in 28.6% of women.[10] A study of 149 married women reports FSD in 73.2%, with difficulties in lubrication (96.6%), arousal (91,3%), orgasm (86.6%), desire (77.2%), and pain (64,4%) predominating. Older age and lesser education were found to be significantly associated.[11] A study in 153 married women found the prevalence to be 55.55%, with associated factors being the longer duration of marriage (>16 years), upper-middle-class status, and middle-grade education.[12] In postmenopausal women, 80.9% had sexual dysfunction, with joint family structure, lower socioeconomic and educational factors being major determinants.[13]

All the studies stressed up on counseling and treating the underlying etiology.

Sequelae of Female Sexual Dysfunction

Conclusive data on the prognosis of FSD are not available. A systematic review of various treatment modalities and

prognosis concluded that the most substantial effect was with hormonal regimes, and though specific domains of FSD improved no treatment, either pharmacologic or psychotherapeutic, demonstrated complete disease resolution.[14] Prognosis depends upon the ability of the female and her partner to recognize and seek help, type of FSD, i.e., whether primary or secondary, whether situational or generalized and on the severity of FSD.[15] The best possible response is in younger individuals and those with partner support, whereas FSD due to structural deficit in older women and those without partner support tend to persist. Sequelae of FSD include psychological distress in both partners, psychosomatic symptoms, aversion to sex, and in the extremes of cases, childlessness.

Approach to a Patient

The five Es of successful sexual questioning/counseling include: experience, etiquette, empathy, ethnic/cultural understanding, environment, which is suitable.[16]

History Taking In Female Sexual Dysfunction

The aim is to establish the type of dysfunction and assess the predisposing, precipitating, and maintaining factors.[5]

The art of history taking is very important to circumvent the social stigma, embarrassment, and psychosocial conditioning of Indian women. Rapport is established by beginning with nonthreatening general questions, and it is important to appear calm, confident, sympathetic, and nonjudgmental.

The patient should be asked to describe her problem in her own words. Has it always been there, or has occurred recently? Is it present in all situations, or in certain situations and with certain persons, whether she has had a normal sexual relationship prior, and can a certain incidence or event be associated with the onset of the problem, are some pertinent questions to be asked after gaining the confidence of the woman.

Specific and screening questionnaires[16-19] may be given, depending upon the patient's level of education and understanding [Table 4].

Patient's as well as partner's attitude to sexual intercourse should be understood: whether she is frightened, repulsed, or feels guilty.

Other pertinent history like past sexual abuse and trauma should be sought. Duration of the condition, whether it was sudden in onset or gradual, any relationship to childbirth,

Table 4: Evaluation of female sexual distress

Specific history	General history	Clinical examination	Tests
Nature of problem and screening question Arousal Orgasm Pain – nature, frequency, whether at initiation or deep penetration, continuous or provoked Apathy and aversion Sexual fantasies Self-stimulation	Diabetes mellitus Hypertension Anemia Pelvic and gynecological disease Chronic fatigue Chronic pain syndromes like migraine, fibromyalgia Other chronic illnesses - respiratory, renal, cardiac, malignancies Abdominal or pelvic surgery	Detailed perineal and vulvovaginal examination for structural integrity and dermatoses	Cotton swab test
Screening questionnaires: 19-point "FSFI" "12-point FSDS" "The brief sexual symptoms checklist for women" Specific questions to be asked in the Indian scenario: Are you currently sexually active? Do you have reduced desire, lack of arousal, orgasm/satisfaction? Is there any special reason for your fear of sex? Do you have any doubts or questions regarding the act of sex?	Rule out: Overcrowding Lack of privacy Joint family Whether children sleep in the same room	Pervaginal examination with bimanual palpation	KOH mount for candida Wet mount for trichomonas Cervical smear Tests for STIs (if indicated)
Patient's and partner's attitude to sex and any discordance in beliefs Partner sexual history, interpersonal relationship, history of STIs, medication , comorbidities	Vulvovaginal diseases STIs Chronic dermatoses like lichen planus, lichen sclerosus Vulvar itch Vitiligo Dysmorphophobia regarding genitalia	Assessment of pelvic floor fitness	Abdominal and pelvic imaging to rule out fibroid, endometriosis, prolapse, urinary incontinence
Predisposing and precipitating factors Stress (interpersonal/emotional/financial) Lack of privacy Chronic medication Health of partner Religious and cultural outlook	Psychiatric illness in self or partner Depression Severe anxiety Schizophrenia PTSD Substance abuse	Rule out prolapse or mass per vaginum, stress incontinence	Tests for chronic diseases Fasting sugar, lipid levels TSH Anemia Cardiac diseases
Specific history based on the type of dysfunction			
Female orgasmic disorder	Most Indian females do not have the concept of female orgasm Ask her about her knowledge of orgasm and whether she has achieved orgasm previously, and under what circumstances? (same partner, place, etc.)		
Female sexual interest/arousal disorder	Question about low libido, decreased sex drive, sexual thoughts or fantasies, whether she initiates intercourse any time		
Female sexual pain/penetrative disorder	All aspects of pain, fear of pain, and avoidance responses to pain should be noted Whether pain occurs in the initial stage or on deep penetration Type and site of pain, vague or localized, association with lower abdominal or urinary pain, genital pain while riding bicycles, inserting tampons, or fingers Whether she has had painless intercourse before? Try to differentiate vulvodynia and vaginismus via history		

FSDS=Female sexual distress scale, FSFI=Female sexual function index, STIs=Sexually Transmitted Infections, PTSD=Post Traumatic Stress Disorder TSH=Thyroid Stimulating Hormone

sexual abuse, pelvic surgery, or menstrual problems should be noted.

A detailed medical and psychiatric history in self and partner should be obtained [Table 4].

Clinical Examination

The following should be undertaken:

- Assess medical, endocrinological, and uro-gynecological health
- Pelvic and genital examination to rule out rare cases of hermaphroditism, genital defects, pelvic floor abnormalities, and any vulvovaginal diseases, estrogen deficit atrophy
- A focused and detailed examination is highly indicated in dyspareunia, vaginismus, previous pelvic trauma
    - Tone of pelvic and vaginal muscles
    - Test for perineal sensation, pain on touching, or vaginal insertion of gloved finger
    - Cotton swab test (gently touching the perineum and vulva with a Q tip or cotton swab in an orderly manner to denote areas of pain and tenderness) in suspected vulvodynia[20]
    - Rule out the following before labeling as vulvodynia/dyspareunia
        - Infections (candidiasis, postherpetic neuralgia)
        - Inflammation (early lichen sclerosus or lichen planus)
        - Malignancy (vulvar Paget's, vulvar intraepithelial neoplasia)
        - Neurological or pelvic trauma, previous obstetric and gynecological surgeries
        - Iatrogenic factors (chemotherapy, radiotherapy)
        - Hormonal problems.
    - A bimanual pervaginal palpation and speculum examination of the vagina and cervix
    - Pap smear and tests for STIs (if indicated)
    - Laboratory investigations - fasting blood glucose, TSH, lipid profile, serum sex hormone assays.

A methodical and thorough history and examination, as summarized in Table 4, goes a long way to reassure the patient that her concern is genuine, even though no pathology is detected.

Treatment of Female Sexual Dysfunction

A combined approach utilizing pharmacotherapy, psychotherapy, and targeted sexual therapy is required[5,21-23] [Table 5].

Lack of a single causative factor, overlap of multiple dysfunctions, and limited expertise complicate management. It calls for a patient-centered and "couple centric" approach with an understanding of the patient's background, knowledge, attitude, and misconceptions about sexuality and fertility. Interpersonal issues with a partner should be addressed before starting medical management. Marital counseling should aid improved communication in sexual and general areas.

The role of religion in FSD should be explored (premarital sex is sinful, sex should be only for procreation, and religious treatments sought earlier) and negative influence mitigated by proper psychotherapy. Attention to general health and well-being, abstinence from smoking and alcohol should also be advocated.

Psychotherapy by trained personnel can mitigate sexual stigma to a great extent.

Pharmacotherapy

It is mainly used in female sexual interest/arousal disorder and Genitopelvic Pain/Penetration Disorders[21,22] [Table 6]. Hormonal treatment is based on hormone replacement with estrogen (topical or systemic), androgen supplementation, and the use of selective estrogen receptor modulators like tibolone[24] and Ospemifene.[25]

Indian context

Hormone replacement therapy is mostly used in postmenopausal vaginitis and not primarily for FSD. Tibolone, though available is costlier, and Ospemifene is not available in the Indian drug market.

Nonhormonal treatment includes bupropion, fibanserin,[21,22,26] prostaglandins,[21] apomorphine,[27,28] phentolamine mesylate.[29]

Bremalanotide[30] Supplements such as Gingko Biloba Extract,[31] ArginMax (containing ginseng, ginkgo, damiana,

Table 5: Outline of therapy of female sexual distress

Condition	Pharmacotherapy	Nonpharmacological treatment	Adjuvant measures
FOD	Topical and intranasal testosterone	CBT Traditional sex therapy Psychodynamic therapy Mindfulness Group psychotherapy Directed masturbation Desensitization Sensate focus exercise Masters and Johnson couple therapy Pelvic muscle exercise (similar to Kegel's) Devices: Vibrators Eros-Clitoral Therapy Device (Eros-CTD, NuGen, Inc)	Maintain general physical and mental health Good nutrition Adequate exercise Avoid stress Abstain from smoking, alcohol, recreational drugs Marital counseling Behavioral modification: Loose cotton underclothing Avoid douches, toiletries, and perfumed soaps Supplements: Ginko biloba L arginine Argimax
FSIAD	HRT: Estrogen (topical/systemic) Testosterone (topical/intranasal/transdermal) SERM: Tibolone, ospemifene Nonhormonal therapy: Bupropion Fibanserin Alprostadil Sildenafil Apomorphine Phentolamine mesylate Bremalanotide		
GPPD	Ospemifene Topical and systemic estrogens Topical anesthetic preparations Capsaicin cream Botulinum toxin	Lubricants and moisturizers Pelvic floor exercises Pelvic floor electrical stimulation Slow and progressive vaginal dilation Surgical vulvar vestibulectomy in severe cases	

FOD=Female orgasmic disorder, FSAID=Female sexual interest/arousal disorder, SERM=Selective estrogen receptor modulator, CTD=Clitoral therapy device, HRT=Hormone replacement therapy, CBT=Cognitive Behaviour Therapy

Table 6: Drugs used in female sexual distress

Agent	Formulation, mechanism	Dosage	Indications
HRT: Estradiol Androgen	Cream, tablet, conjugated cream, ring, topical, intranasal, transdermal	Up to 300 mcg/day	Female sexual interest/arousal disorder
SERM: Tibolone Ospemifene	19- nor testosterone derivative - metabolized into estrogenic and progesterone/androgen components Nonestrogen tissue SERM	30-60 mg/day	Female sexual interest/arousal disorder Allieviates sexual pain increases arousal and desire
NHT: Bupropion Fibanserin	Tablets NDRI Tablets 5-HT (1A) agonist/5-HT2 antagonist	150 mg/day 100 mg at bedtime	Acts upon all aspects of sexual functioning, including arousal. Widely used in India for FSD Increases libido (“the female viagra”)
Prostaglandins: Alprostadil	Increase vaginal secretion, relax arteriolar smooth muscles a synthetic topical PGE1	To be applied before vaginal intercourse	In postmenopausal women with hypoactive sexual desire
Sildenafil	Selective PDE 5 inhibitor→cGMP accumulation→enhances relaxing effects of nitrous oxide on erectile tissue	Oral tablets	For increasing physical arousal
Apomorphine	Short-acting dopamine agonist	3 mg/day sublingual or nasal spray	Increases desire and arousal. (Used in India only for parkinsonism)
Phentolamine mesylate	Nonselective alpha-1 and 2 adrenoceptor antagonist	40 mg/day oral/topical	Female sexual arousal disorder in postmenopausal women on HRT
Bremalanotide	Alpha-MSH analog, melanocortin 4 receptor agonist	0.75 mg s/c, 45 min before anticipated intercourse	Synthetic aphrodisiac for hyposexual or arousal disorder in premenopausal women (FDA approved)

SERM=Selective estrogen receptor modulator, NDRI=Norepinephrine/dopamine-reuptake inhibitor, FSD=Female sexual distress, HRT=Hormone replacement therapy, NHT=Non Hormonal Therapy, HSIAD=, PDE=Phosphodiesterase, cGMP=cyclic guanosine monophosphate

L-arginine, multivitamins, and minerals),[32] L-arginine have been tried in FSD. L-arginine (nitric oxide precursor) Yohimbine (alpha-2 blocker) combination is currently undergoing investigation in female arousal disorders.[33]

Physiotherapy and Devices

Eros-Clitoral Therapy Device (Eros-CTD, NuGen, Inc.), which increases blood flow to clitoris by gentle suction is an FDA-approved device for FSAD. This improves arousal. Intravaginal introduction of dilators with progressively increasing diameters aid women with vaginismus. These dilators are used twice daily for 15 min each, and once comfort is achieved with reasonable sized dilators, penile penetration by the partner may be attempted.[34]

Physiotherapy involving gentle massage of introitus and clitoris, pelvic muscle exercises, which include alternative contraction and relaxation[35] are also tried. Progressive muscle relaxation involves the patient alternatively contacting and relaxing her pelvic floor muscles around the examiner’s finger.

Recent Trends

Cosmetic procedures such as laser treatments for vaginal tightening and surgical labiaplasty for symmetrical labia are useful in subsets of dysfunction associated with low self-esteem.

The “O shot” comprises autologous platelet-rich plasma (PRP) injected into the lower anterior vaginal wall, slightly bulging it up to aid “vaginal orgasms.”

Intraclitoral and intravaginal PRP, though not statistically significant, has shown improvement in pain, overall sexual functioning, and patient satisfaction.[36,37]

Botulinum injection and onabotulinum toxin A (50-300 U) transvaginal injection into the pelvic floor nerves prevents vaginal muscle spasm, thereby helping in the treatment of vaginismus and dyspareunia.[38] “Monalisa fractional micro-ablative carbon-dioxide laser” has given good results in all FSD categories. Three treatments are scheduled 4 weeks apart.[14]

Prognosis

This depends on the underlying cause and whether the dysfunction is primary or secondary, or situational; it also depends on psychosocial interaction between partners and compliance to treatment. Treatment is often prolonged. Lacunae in FSD management and Recommendation for Indian context: Most Indian females are ignorant about their sexual functioning and are reluctant to approach caregivers due to embarrassment, social stigma, and hesitancy to disclose to the partner. Female sex education, raising community awareness about sexual health and a scientific and empathetic approach actively involving both partners in treatment will go a long way in improving the scenario. The use of appropriate questionnaires and checklists stresses the importance of the condition and helps the patient be at ease. Management should be multifaceted and include behavioral, physical, and pharmacological treatment. The establishment of FSD liaison clinics involving dermatologists, gynecologists, urologists, psychiatrists as well as clinical psychologists is imperative for a holistic approach.

More research needs to be done for the development of regional and culture-specific questionnaires and treatment options.

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Conflicts of interest

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