

## Female Sexual Dysfunction: Clinical approach

- What Nurses want to know -

### Alessandra Graziottin MD

Director, Center of Gynecology and Medical Sexology

H.San Raffaele Resnati, Milano, Italy

Co-Director, Post-graduate Course of Sexual Medicine

University of Florence, Italy

### Introduction

Nurses have an increasing role in the health care system worldwide. Besides their competence, their *availability to listen* – verbally and non verbally – to patients, to their fears and concerns, give them the opportunity to become primary confidants of the many issues and questions diseases raise in the domain of *quality of life and sexuality*.

To *train nurses in sexual medicine* may significantly improve their competence in addressing critical sexual concerns, more frequent in the specialty of urology and gynecology, and increase the quality of support the health system can offer to patients. It may as well increase their professional satisfaction thanks to a more comprehensive and patient-centered approach.

For nurses who are willing to have a more structured learning about FSD, recent books [1-3] and web-sites will be indicated (see ref.), to ease their progressive confidence in this fascinating field.

### Characteristics of women's sexuality

Women's sexuality is *multifactorial*, rooted in biological, psychosexual and contextual dimensions, and *multisystemic*, involving all the biological systems – hormonal, muscular, metabolic, vascular, nervous, immunity – that contribute to an appropriate physical and emotional response [1-3].

More than in men, *co-morbidity*, the contemporary presence of more than one sexual disorder, is the hallmark of most complaints. Furthermore female sexuality is *discontinuous* throughout women's life for physiological (periods, pregnancy, breast feeding...) and contextual reasons, and strongly related to the *feelings for partner* and the *meaning* sexual intimacy has.

These potent psychosexual variables have somehow biased past researches, with an over focus on psychogenic etiologies and an almost substantial dismissal of the biological ones, with dramatic consequences in term of missed diagnosis and disappointing treatments, particularly when, like in dyspareunia, the understanding of pathophysiology of pain is key [4].

### Diagnosis of FSD

From the clinical point of view, an integrated diagnostic approach is necessary to tailor treatment according to the individual and couple's needs, at best of our current scientific and clinical knowledge. The more recent classification of FSD is summarized in Fig. 1. However, definition of FSD is still a work in progress, for the increasing attempt to capture the wording that best defines women's sexual experience.

Preliminary key points in the diagnosis should be:

- accurate *listening to the complaint's wording*, to verbal and non verbal messages;
- definition of the *nature of the disorders*: desire disorder, arousal disorder, orgasmic disorder, sexual pain disorder (Fig. 1)
- its being *lifelong or acquired*, with special attention to the association with the pathologies and comorbidities the patient is currently complaining about;
- *generalized or situational*;
- *organic, psychogenic/contextual* or, as it is in most cases, *mixed*;
- *the severity of distress it causes to the patient*.
- of special importance, for nurses, is to help the patient to understand if the disorder is associated or caused by the medical condition they are being treated for. This is of the highest importance in urological and gynecological conditions: medical and sexual comorbidity is very

frequent in these contexts.

- *accurate examination of the woman*, and particularly of the external genitalia, of the vagina and of the pelvic floor may be very informative for nurses, besides physicians, as well. This is mandatory when genital arousal disorders, sexual pain disorders and orgasmic disorders are complained of; it may be useful even when sexual desire disorders are the leading complaint, to diagnose biologically rooted comorbidity of other FSD with acquired loss of libido [1, 3]

*Co-morbidity* with other FSD should indeed be accurately recorded with attention to which sexual disorder came first, together with the *meaning* of the symptom for the woman. Comorbidity with medical conditions –urological, gynecological, proctological, diabetabolic, neurologic etc- should as well be investigated.

The high association between sexual pain disorders and urogenital dysfunctions should be actively investigated. Latent classes analysis of sexual dysfunctions by risk factors in women indicate *that urinary tract symptoms* have a relative risk of  $RR = 4.02$  (2.75-5.89) of being associated with arousal disorders and a relative risk of  $RR=7.61$  (4.06-14.26) of being associated with sexual pain disorders, according to the epidemiological survey of Laumann et Al., 1999. [4]

The high comorbidity has indeed a plausible *pathophysiologic background*, particularly in hypoestrogenic conditions, in the progressive urogenital dystrophy, in the reduced vascular congestion around the vagina and the urethra, where an extension of the equivalent of male corpus spongiosum has been histologically demonstrated, and in the defensive hypertonic pelvic floor.

The worsening genital arousal disorders many women complain of, unless at least topical estrogen therapy (ET) is given, may cause vaginal dryness, dyspareunia and post-coital cystitis, usually appearing 24-72 hours after intercourse.

In stable couples, current *feelings for partner*, ie *quality of the relationship*, and *quality of partner's sexuality* (inclusive of general and sexual health) should as well be investigated [1-3].

The woman's *general health* should be examined, with special focus on conditions that may directly or indirectly impair the woman's mental and/or genital response.

*Careful physical examination* should be performed, as many physical problems are better diagnosed when attention is paid to vulvovaginal trophism, hypo or hypertonic pelvic floor conditions, inflammations, pain-map recording.

### Treatment of FSD

According to the diagnosis, available treatments may be summarized focusing on the leading sexual complaint the woman is reporting. More attention will be devoted here to medical treatments, whilst psychosexual approaches will be briefly mentioned. Nurses more interested in the latter approach are referred to the detailed book of Leiblum and Rosen [2]

### Key points in the medical treatment of:

#### a) **Desire and central arousal disorders**

Desire and central arousal ("I feel excited") consistently overlap from the neurobiological and psychosexual point of view. Comorbidity between desire disorders and central arousal disorders is extremely frequent in women. The two conditions are therefore usually treated in parallel and indeed do respond to the same treatment(s).

Desire disorders increase with age. Menopause has a further detrimental effect. Hormone treatment is indicated when desire disorders and associated FSD are acquired after the menopause and have a prominent hormonal etiology. [1,3, 5,6]

Specific symptoms and androgen's plasmatic levels in the lower quartile, or below the normal range for the age, suggest the diagnosis of the so called "Androgen Insufficiency Syndrome", according to the last Princeton consensus' criteria [7]. Androgen treatment may be indicated when low desire causes personal distress, thus causing the *Hypoactive Sexual Desire Disorder* (HSDD) .

Two reviews of RCTs on testosterone in estrogen repleted postmenopausal women indicate the efficacy of testosterone on all domains of women's sexual response, and some psychological benefits as well [8,9].

Specifically, recent RCTs have proven the efficacy of testosterone patches to improve sexual desire, sexual satisfaction and all domains of sexual response [10-13]. *Testosterone patches* (300mcg twice/week) have been approved in Europe, in July 2006, with the specific indication of Hypoactive Sexual Desire Disorder (HSDD) in surgically menopausal women.

Women and partners should be informed about the “lag time” (up to two, three months) between onset of treatment with testosterone patches and sexual improvement. This “waiting time” could be constructively used to address concomitant psychosexual issues (personal and/or partner related) and to (re)explore the sexual map after the difficult period of frustrating HSDD before the appropriate diagnosis has been made.

In spite of the available evidence, controversy still exists on the current indication of testosterone treatment in women with HSDD [14].

Hyperprolactinemia reduces sexual desire, besides causing amenorrhea. Hypoprolactinemic drugs are useful to restore sexual desire when prolactin is supraphysiologic.

#### **b) Genital arousal disorders**

According to the diagnosis, *acquired genital arousal disorders* may be treated with [1,3,5,6,15,16]:

- *Systemic or topical sexual hormones, either estrogens or testosterone or both:*
  - \* Systemic estrogenic hormonal therapy (ET), with transdermal gel, with patches or oral pills, is the choice when central and genital arousal disorders are complained of, and when vaginal dryness is the leading complaint. In women with uterus, progesterone or progestins must be added, either in continuous or sequential treatment, to protect the uterus [5,6];
  - \* Topical (i.e.vaginal) treatment with estradiol -two tablets a week or one every other day applied deep in the vagina- is effective as well when genital arousal disorder causes or is associated with dyspareunia, post-coital cystitis and orgasmic difficulties and when systemic treatment is not indicated or not desired [5,6];
  - \* Recurrent vaginitis and cystitis from colonic germs may as well be improved by topical vaginal estrogens [15,16];
  - \* Topical testosterone, (2% in vaseline jelly or petrolatum), applied daily to the external genitalia, over the vulva, in minimal quantity, may anecdotically improve the clitoral and bulb-cavernosal arousal response, easing vulvar congestion and the orgasmic response.
- *Pelvic floor rehabilitation and/or biofeedback*, that may improve perivaginal muscle tone and competence, thus increasing also partner's sensations. It may improve as well mild stress incontinence, co-morbid with genital arousal disorders [1,3].

If genital arousal disorder is in co-morbidity with pain and/or fear of it, pain related issues should be treated first.

#### **c) Orgasmic disorders**

*Acquired* orgasmic disorder may benefit from [1-3]:

- HT, topical (vaginal estradiol in tablets or vaginal creams and/or vulvar testosterone) and/or systemic, with or without androgens, if the leading etiology is hormonal;
- Pelvic floor rehabilitation, if there is this co-morbidity with hypotonic pelvic floor conditions;
- Appropriate pharmacologic and/or rehabilitative treatment when fear of leaking at orgasm is complained in association with urgency and/or when urge incontinence with an overactive bladder is diagnosed;
- EROS-clitoral device, indicated when there is an arousal co-morbidity;

When FSD comorbidity is diagnosed, i.e. when all the sexual response is impaired, accurate treatment of *predisposing, precipitating and maintaining factors*, biological, psychosexual and/or contextual, should be proposed;

**d) Sexual pain disorders: dyspareunia and vaginismus**

Dyspareunia and vaginismus may interfere with all the dimensions of the sexual response (Fig.1). Co-morbidity of different FSD with sexual pain disorders should always be investigated in detail.

Specific issues involve the diagnosis and treatment of coital pain.

- Lifelong sexual pain disorders should be approached with a deeper understanding of the *pathophysiology of pain*, in its *nociceptive* and *neuropathic* component [17].
- Lifelong *dyspareunia* is reported in on average one third of our patients. Concomitant arousal disorders (unwanted pain is the strongest reflex inhibitor of genital and mental arousal) and libido disorders should as well be addressed. Co-morbidity with *vaginismus* should be diagnosed and treated.

Accurate recording of the “*pain map*”, is mandatory in both lifelong and acquired dyspareunia, as *location of pain and its onset are the strongest predictors of its organicity*, that should be diagnosed and addressed [1,3,17]. Co-morbidity with urological (lower urinary tract symptoms, LUTS) and proctological symptoms (chronic obstructive constipation, irritable bowel syndrome, haemorrhoids, anismus) is frequent and should be recorded and addressed [18].

- Acquired dyspareunia requires an even more sounded medical approach. A step-care model of *dyspareunia* caused by *vulvar vestibulitis syndrome (VVS)* should address *predisposing, precipitating and maintaining factors*, according to the presenting Author, by [17]:
  - a) treating recurrent vaginal infections;
  - b) improving vaginal trophism, with at least topical estrogen, when indicated;
  - c) relaxing the tighten pelvic floor (with self massage, stretching, electromyographic biofeedback and/or pelvic physiotherapy);
  - d) reducing hyperalgesia (locally, with electroanalgesia or, in severe cases, with the ganglion impar block; systemically with tricyclic antidepressant or gabapentin in the most severe cases).
  - e) vestibulectomy may be considered in severe Vulvar vestibulitis syndrome (VVS), non responsive to conservative treatments.

Acquired co-morbidity in libido and arousal disorders is complained of in another third to half of women suffering from dyspareunia, according to the time of consultation from the onset of symptoms and should be treated accordingly.

Anxiety, fear of pain and sexual avoidant behaviours should as well be addressed. The shift from pain to pleasure is then key from the sexual point of view. Sensitive and committed psychosexual support to the woman and the couple is therefore mandatory.

Acquired vaginismus is usually overlapping with dyspareunia.

**e) Sexual satisfaction disorders**

They are a new controversial entity, not yet accepted in the international nosography. However, they should be considered in their biological and psychosexual meaning, per se and for the potential co-morbidity with other FSD.

**Key points in the psychosexual treatment of FSD:**

**Individual psychosexual therapy**

*Lifelong desire and central arousal disorders* (“I do not feel mentally excited”) (often in co-morbidity) may benefit from individual psychosexual or behavioural therapy, if sexual inhibitions, poor erotic skills, poor body image, low self confidence, but also previous abuse, are in play. Affective disorders, namely depression and anxiety, should be addressed, if present [1-3].

*Lifelong “isolated” orgasmic disorders* may benefit from a behavioral educational treatment, encouraging self-knowledge and eroticism with the experience of higher arousal sensations, use of vibrators or of clitoral device up to orgasm [2,3]. More often, however, the orgasmic disorder is associated with poor arousal, with or without performance anxiety. These conditions should therefore be treated together.



*Lifelong vaginismus* should be addressed with a behavioural therapy, progressive rehabilitation of the pelvic floor and pharmacologic treatment aiming at modulating the intense systemic arousal in the subset of intensely phobic patients. In the latter group, *comorbidity with sexual aversion disorder* should be investigated and previously treated [1-3].

*Acquired FSD* should be treated according to the leading etiological factor(s), biological and psychosexual.

### **Couple therapy**

Couple issues should be addressed when the couple shares the same education-related inhibitions or communication difficulties, when symbiotic dynamics with poor differentiation are critical, or when conflicts and aggressiveness contribute to loss of desire [1-3].

### **Male disorders**

Male Sexual Disorders (MSD) (premature ejaculation, erectile deficit, libido disorders...) should as well be diagnosed and treated, if he appears to be the "symptom inducer" and the woman is the "symptom carrier" [1-3].

This issue is of special importance for nurses working with male urological patients: in case of MSD, their suggestion that the couple should seek for help could prove to be of the highest importance to encourage both partners to consult together.

### **Conclusion**

The complexity of FSD requires a dedicated diagnostic and therapeutic team, sharing a common pathophysiologic and psychodynamic cultural scenario, with the aim of offering the most integrated understanding of the meaning of the symptom and the most effective comprehensive treatment. Treatment's cost-effectiveness, requires an optimal balance between cost containment and quality of results in terms of diagnosis, effective treatment of FSD (and MSD!) with increase sexual pleasure and satisfaction for the woman and the couple.

In this quality scenario, trained nurses can be a critical part of the FSD team, addressing the first consultation with the patient and/or the couple, recording clinical data and questionnaires, and personally treating the pelvic floor-related sexual disorders after a specific training in this important rehabilitation area.

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**Web-Sites Educational Resources**

- www.aasect.org (American Associate of Sexuality Educators, Counselors and Therapists)
- www.advocateweb.org/hope - (professional-client boundaries)
- www.afud.org (Association for Urological diseases)
- www.isswsh.org (International Society for the Study of Women’s Sexual Health)
- www.nva.org (National Vulvodynia Association)
- www.sexualhealth.com - (Sex and disability)
- www.siecus.org - (Sexual Information and Education Council of the US)
- www.sstarnet.org (Society for Sex Therapy and Research)
- www.TWSHF.org (information for health care providers and clients)

**FIG. 1 Impact of dyspareunia on different dimensions of the sexual response**

This circular model, formulated by the presenting Author, contributes to the understanding of:

- frequent overlapping of sexual symptoms reported in clinical practice (“co-morbidity”), as different dimensions of sexual response are correlated from a pathophysiologic point of view;
- overlapping between sexual desire and central arousal;
- interaction between sexual arousal and orgasm;
- potential negative or positive feedback mechanisms operating in women’s sexual function;
- the *direct* inhibiting effect of dyspareunia on genital arousal and vaginal receptivity and the *indirect* inhibiting effect on orgasm, satisfaction and sexual desire, with close interplay between biological and psychosexual factors

