When pleasure becomes pain

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In the era of "Fifty Shades of Grey", more and more people are experimenting with making pain part of their sexual play. This pain should be consensual and inflicted in a controlled manner within the context of an agreement, where the receiver is in complete control of the intensity and duration of the pain.[1] There are, however, many millions of women around the world who are experiencing pain during intercourse in an unwanted manner.[2] Their pain is as far as it gets from the kinky fantasy created by popular media. Their pain is real and often debilitating, which impacts their quality of life, psychological health and relationships.[3]

If there is no overt abnormality that can be surgically corrected, patients are often told to seek the help of a psychologist, who may be left feeling as desperate and helpless as the patient in trying to find a workable solution for their pain. The impact of the pelvic organ control centre in the emotional motor system on pelvic pain is undeniable,[4] but the reality is that almost all sexual pain disorders have a physiological (not psychological!) basis. A very specific diagnosis can be made in almost all cases. That implies a very specific, evidence-based treatment plan. Hope for the patient. Less frustration for the physician. A win-win for all!

Merely making a diagnosis of vaginismus[5] is seldom helpful in the treatment process of the patient. The DSM V has merged the diagnosis of vaginismus with that of dyspareunia as "Genito-Pelvic Pain/Penetration Disorder" with numerous criteria, but very little indication of actual cause and potentially effective treatment.[6]

Table 1. Vaginismus definition.[5]

Vaginismus indicates the persistent or recurrent difficulties of the woman to allow vaginal entry of a penis, a finger, and/or any object, despite the woman's expressed wish to do so. There is often (phobic) avoidance and anticipation, fear, and experience of pain, along with variable involuntary pelvic muscle contraction. The disorder may be lifelong or acquired, generalised or contextual, biologic and/or psychogenic and may (or may not) cause personal distress.

Table 2. Genito pelvic pain/penetration disorder DSM V diagnostic criteria.[6]

For at least 6 months, a person experiences persistent or recurrent difficulties towards vaginal penetration manifested as at least one of the following:

- Intense fear/anxiety in anticipation of, during, or as a result of vaginal intercourse
- Actual pain experienced in pelvis or vulvovaginal area during attempted or as a result of vaginal penetration
- Marked tensing or tightening of the lower pelvic/inner-abdominal muscles during attempted vaginal penetration
- Diagnostic criteria requires that these symptoms cause the female significant distress.

This condition **cannot be better attributed to**:

- A nonsexual mental disorder (i.e., posttraumatic stress disorder)
- Relationship distress (i.e. domestic violence)
- Other life stressors impacting a person's sexual desire
- Any other medical condition

In response to this, the "2015 Consensus Statement on Persistent Vulvar Pain"[7] was published with the aim of simplifying the diagnosis of specific sexual pain disorders to direct the physician towards the appropriate treatment options. In a recent US study, patients with vulvodynia were offered a combination of seventy-eight treatment options.[8] If we want to get good results without polypharmacy and spending the total of a patient's annual income on their sexual pain, it is of utmost importance to make a specific diagnosis followed by evidence-based treatment.

Diagnosis

What follows is an explanation of the use of the 2015 Consensus Statement on Persistent Vulvar Pain,[6] through the use of a case study of a typical patient seen in practice:

A 26-year-old female presents with extremely painful intercourse for four months after getting married to her husband as a virgin. She started on an anti-androgenic contraceptive pill three months before her wedding. On examination she has allodynia of 8/10 anterior and posterior to her vaginal opening with significant pelvic floor muscle spasm (it is difficult and painful to insert one finger).

The first step is to evaluate if any of the Category A criteria might apply to her:

Table 3. 2015 Consensus terminology and classification of persistent vulvar pain – vulvar pain caused by a specific disorder[7]

A. Vulvar pain caused by a specific disorder*

- Infectious (e.g. recurrent candidiasis, herpes)
- Inflammatory (e.g. lichen sclerosus, lichen planus, immunobullous disorders)
- Neoplastic (e.g. Paget disease, squamous cell carcinoma)
- Neurologic (e.g. post-herpetic neuralgia, nerve compression or injury, neuroma)
- Trauma (e.g. female genital cutting, obstetrical)
- Iatrogenic (e.g. post-operative, chemotherapy, radiation)
- Hormonal deficiencies (e.g. genito-urinary syndrome of menopause [vulvo-vaginal atrophy], lactational amenorrhea)

- Is there any evidence, from the history or clinical examination, of recurrent genital infections? Microscopy, culture and sensitivity (MCS) and/or or polymerase chain reaction (PCR) of a discharge or herpes PCR on visible lesions can be performed. Expert opinions differ as to the absolute necessity to investigate for infections in the absence of symptoms.[9]
- Is there a reason to believe that there might be an inflammatory condition like lichen sclerosus, lichen planus or immunobollous disorders? *Tip: If the mucosa looks abnormal, take a biopsy to make a definite diagnosis. If the skin looks normal (apart from mild erythema), it is very unlikely anything will be gained from a biopsy.*[10]
- Any suspicious lesion on the genitals that might be neoplastic (like Paget's or squamous cell carcinoma): Biopsy to confirm diagnosis.[10]
- Is there any evidence of a specific nerve being involved, like the pain worsening when the patient is sitting, as is the case in pudendal neuralgia? Is there a palpable neuroma? Are we aware of any known nerve injuries? *Tip: If the diagnosis is uncertain and funds are limited, try medication for neuralgic pain (pregabalin, gabapentin or amitriptyline) in combination with physiotherapy. If this is not effective, consider further investigation like electrophysiological studies or MRI neurography of the pudendal nerve to confirm the pudendal neuralgia, neuropathy or injury.*[11]
- Is there any evidence of obstetric trauma or of genital cutting or other direct injuries? Is there a need for surgical correction of these, or would the patient benefit more from optimising the health of the mucosa in the injured area? *Tip: Try to avoid further surgery.*[12]
- Ask about a history of iatrogenic trauma in the form of genital surgery, radiation or chemotherapy.
- Ask about hormonal deficiencies: Is the patient peri- or post-menopausal? Is the patient taking local or systemic oestradiol and/or testosterone therapy?[13] Is the patient lactating? *Please note: Low-dose anti-androgenic contraceptive pill-use is not seen under this category, but as one of the contributing factors to vulvodynia.[7]

In the case of this patient, none of the above conditions applied. The next step is to examine Criteria B for vulvodynia and which descriptors applied to her:

Table 4. 2015 Consensus terminology and classification of persistent vulvar pain – vulvar pain caused by a specific disorder[7]

B. Vulvodynia

Vulvar pain of at least 3 months duration, without clear identifiable cause, which may have potential associated factors.

Descriptors:

- Localised (e.g. vestibulodynia, clitorodynia) or generalised or mixed (localised and generalised)
- Provoked (e.g. insertional, contact) or spontaneous or mixed (provoked and spontaneous)
- Onset (primary or secondary)
- Temporal pattern (intermittent, persistent, constant, immediate, delayed)

*Women may have both a specific disorder (e.g. lichen sclerosus) and vulvodynia

- She has had painful intercourse for four months – first vulvodynia criteria met.
- She has localised pain (she only has vestibulodynia as demonstrated by the allodynia of 8/10 around the vaginal opening).
- She has provoked pain – there is no pain unless there is contact with the vestibule.
- She has primary pain as defined by "pain since the first onset of intercourse or an attempt at penetration".
- The temporal pattern is persistent. It is not only present in certain situations like a lack of arousal or stress. It is present under all circumstances and does not get better.

These factors are then usually listed together to create a sensible diagnosis, such as in this case:

Primary provoked vestibulodynia. That already gives a good indication of the nature of the pain, but it does not elude to a cause yet. One must look at the *following potential associated factors* to make a more precise diagnosis and find the appropriate direction for the treatment plan:

- Are there signs of these associated **pain syndromes:** Painful bladder syndrome, fibromyalgia, irritable bowel syndrome, temporomandibular disorder? To optimise the treatment outcome of the vulvar pain, these underlying conditions must be identified and treated.[14]
- There are three mechanisms through which **genetics** can play a role: susceptibility to candida infection, tendency

to prolonged periods of inflammation and tendency to overreact to combined oral contraceptives. A sensitive umbilicus is often an indication of the genetic type.[14]

- **Pharmacologically induced hormonal factors**, especially the use of low-dose anti-androgenic pills.[15] From author's personal experience with almost two thousand patients, this is the biggest cause of provoked vestibulodynia in young women in South Africa.
- **Inflammation** has been demonstrated to be present in women with vulvar pain. There are different mechanisms including increased degranulation of mast cells and an inability to downregulate inflammatory cytokine activity, leading to hyperinnervation of the vestibule.[16]
- From author's experience, it is the absolute exception if a patient with persistent vulvar pain does not have a **musculoskeletal** component to their pain. There is almost always a hypertonic pelvic floor with myofascial and neural disruptions. Pelvic function physiotherapy is an extremely effective evidence-based treatment of the musculoskeletal component of vulvar/pelvic pain.[17]
- In many women, **neurological** mechanisms also play a role demonstrated by changes in the brain, increased general pain perception as well as peripheral **neuroproliferation** leading to increased sensitivity (allodynia).[18,19]
- **Psychological Factors** do play a role in persistent vulvar pain but should not be seen as the cause of it. Anxiety, depression, catastrophising, as well as sexual abuse etc. should be addressed to improve the outcome of patients suffering from pain.[20]
- **Structural Defects** like pelvic organ prolapse might be contributing to vulvodynia and there is some evidence that correcting the prolapse could potentially cure the vulvodynia, but this cause of allodynia has only been reported in a few case studies.[21]

Table 5: 2015 Consensus terminology and classification of persistent vulvar pain – Appendix: Potential factors associated with vulvodynia*[7]

- Co-morbidities and other pain syndromes (e.g. painful bladder syndrome, fibromyalgia, irritable bowel syndrome, temporomandibular disorder)
- Genetics
- Hormonal factors (e.g. pharmacologically induced)
- Inflammation
- Musculoskeletal (e.g. pelvic muscle overactivity, myofascial, biomechanical)
- Neurologic mechanisms
- Neuroproliferation
- Psychosocial factors (e.g. mood, interpersonal, coping, role, sexual function)
- Structural defects

*The factors are ranked by alphabetical order

In this case study, the following associated factors were present:

Primary provoked vestibulodynia with the following associated factors:
Pharmacologically induced hormonal factors (the pill), neuroproliferation (as demonstrated by the allodynia) and musculoskeletal problems with a hyperactive pelvic floor.

We find it helpful to also note if there is vaginismus-type behaviour (e.g. closing of the legs) during the examination or during an attempt at intercourse. In our experience, if it is present, it is more likely that psychotherapy might be necessary. It is also important to specifically note the presence of depression or anxiety and treat this to improve the outcome. [22]

Management and treatment plan

In our team the patient will receive customised, multi-modal treatment in keeping with current research.[12,23] She will be advised to stop the pill and an intra-uterine device will be suggested for contraception.[15] She will receive topical oestrogen and testosterone for the hormonal imbalance.[24] She will also be sent for pelvic floor physiotherapy[17,23] by one of our very experienced team members, as well as work with vaginal dilators[25] to address the psychological component and the fear of penetration that has developed. She will be offered sex therapy with her partner, where a reconceptualisation of pain will be facilitated[26] and sensate focus used to create a safe environment to first be sensual and intimate and later add intercourse after a period where sex was banned.[27] Psychotherapy should also be offered for all aetiologies.[28] If first-line interventions fail, botulinum toxin injections[25] or vestibulectomy[29] might be considered.

This is only one example of a custom-made treatment plan that is developed for a patient with painful intercourse, according to their specific diagnosis. Every patient will be different. If this programme is followed, pain-free penetration is often attained before six weeks on treatment, depending on multiple factors of course.

Conclusion

The effective treatment of sexual pain disorders is determined by making the correct diagnosis.

Please note: This paper did not focus on the organic causes for deep dyspareunia (endometriosis, fibroids, cysts, etc). Those should be excluded by gynaecological examination. Due to limitation of length, it also did not focus on the details and evidence base of the various treatment options or on the management of chronic pelvic pain. Once the correct diagnosis has been made however, it is easy to access the latest guidelines for that specific condition.

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Take-home message

- *If a woman complains of painful intercourse, make a specific diagnosis to devise a specific and custom-made treatment plan.*
- *If you are not able to make a specific diagnosis: Refer (to a colleague with a special interest in sexual pain, not necessarily a psychologist!)*

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