

A multidisciplinary approach to a patient with vulvodynia: a successful treatment and outcome

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Abstract

Vulvodynia is chronic vulvar pain or a burning sensation lasting for at least 3 months without a cause. We present the case of a 53-year-old postmenopausal woman that experienced vulvar and vaginal burning, and discomfort and pain during sexual intercourse for 3 years, which greatly reduced her quality of life (QOL) despite the absence of itch and genital skin lesions. Her regular gynecological exams showed no pathology, and so she was referred to a dermatologist, who initiated a multidisciplinary treatment approach involving several specialists: an anesthesiologist, gynecologist, urologist, psychiatrist, and dermatologist. Targeted psychiatric treatment (amitriptyline), together with acupuncture treatments and support by a gynecologist, led to a major improvement in symptoms and QOL, as well as a decrease in depression and anxiety measured by the Beck Depression Inventory II (BDI-II) and State-Trait Anxiety Inventory (STAI). A multidisciplinary and integrative approach was crucial for determining a diagnosis and achieving an excellent outcome.

Keywords: vulvodynia, management, treatment, quality of life, urogenital system

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Introduction

Vulvodynia is chronic pain or a burning sensation of the vulva lasting for at least 3 months. The cause is unknown, and it is potentially associated with other comorbidities and pain syndromes, related or unrelated to sexual activity. The worldwide prevalence of vulvodynia varies (6–20%), and it is considered underreported (1). Although it is a poorly understood condition, vulvodynia is believed to involve numerous factors, including genetics, immunology, and even diet (2–5). The literature also suggests that a primary trigger causing inflammation may be direct trauma to the vulva (5). Other potential factors could be musculoskeletal, neurological, comorbid pain syndromes (e.g., fibromyalgia and irritable bowel syndrome), and psychosocial factors (4). A diagnosis is based on the exclusion of other diseases. A thorough review of the patient's clinical history is crucial for evaluation and effective management, and a pelvic examination and cotton-swab test are also useful (4). No single treatment is successful in all women; many common treatment options are used: oral tricyclic antidepressants and gabapentin, topical treatments (amitriptyline, gabapentin, lidocaine, baclofen, and hormones), and alternative therapies (physiotherapy, psychotherapy, and surgery) (1, 3). Recently, acupuncture has become a more popular therapy option (6, 7).

Case report

We present the case of a 53-year-old postmenopausal woman with vulvar and vaginal burning, and discomfort and pain during sexual intercourse lasting for 3 years without visible genital and skin lesions and without itch. She had been examined repeatedly

by gynecologists, but workups revealed no gynecological pathology and negative cervical smear results. Her medical history also showed three to four relapses of urinary tract infections annually and, despite antibiotic treatments, she had subjective difficulties with urination. Because she did not have any clinical, diagnostic, or visible pathologies, her true condition went unrecognized. Thus, she had not received treatment before arriving at our clinic.

She was thus referred to our dermatology department for an allergy workup and to check for possible allergies related to dyspareunia and sexual dysfunction. Initially, when she arrived at the examination, the patient was desperate and crying due to her problem. In the management of, and approach to the patient, the dermatologist-allergist performed allergy tests and did not identify any allergies, and then chose a multidisciplinary approach to the patient. A physical examination of the patient found no skin pathology. She also had a history of depression at some point in the last 5 years, but she was not under regular psychiatric treatment. She also had a history of migraines with an aura and had been previously treated with naproxen and sumatriptan. The results of abdominal, cardiovascular, and pulmonary examinations were normal. A gynecologist was consulted (by the dermatologist), and when a gynecological examination did not uncover physiological abnormalities—genital findings and cervical swabs were normal—the gynecologist suggested consulting an anesthesiologist for pain management. She was also referred to a urologist, who recommended treatment for a genital infection. In line with the anesthesiologist's recommendations, the patient underwent a total of nine acupuncture treatments over 3 months—she received one to two acupuncture treatments per week (or every 2 weeks) for 3 months. The acupuncture treatment points used were Du Mai (DM) 20, Pc7, and St40 on the dominant side of body and

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Ling Gu, Sp6, and Liv3 on the non-dominant side. All points were punctured with sterile 0.15 × 15 mm needles retained for 30 minutes. An anesthesiologist also applied two auricular acupuncture points on the dominant ear, internal genital area, and the Shen Men point (sterile 0.2 × 1.4 mm press needles were used). The points for auriculotherapy were identified using an auriculoacupuncture atlas and an electropoint detector. The auricular needles were left in place until the next treatment. The acupuncture sessions, combined with other therapy, gave our patient good results, which was confirmed by a quality of life (QOL) questionnaire.

At her first appointment, the patient's quality of life, as measured by the Dermatology Life Quality Index (DLQI), was significantly impaired (Table 1). Her initial DLQI score was 18 (very large effect on patient's life); 3 months later, it was 13, and at the 18-month follow-up her score was down to 9. When looking at psychological factors, the State-Trait Anxiety Inventory (STAI) and Beck Depression Inventory II (BDI-II) were used. STAI assesses the patient's anxiety level in two ways: state anxiety (temporary feeling at the present time) and trait anxiety (anxiety level as a personal characteristic). At her first appointment, our patient had a state raw score of 52 (centile rank 99) and trait raw score of 36 (centile rank 73). The BDI-II was used to assess depression at the patient's initial evaluation; her score was 10 (mildly depressive, lower limit). STAI and BDI-II values are presented in Table 1.

Immediately following the questionnaire results, regular psychiatric treatment was introduced along with amitriptyline with dose adjustment (initially 25 mg, followed by 50 mg). She had regular follow-ups with a gynecologist, psychiatrist, and anesthesiologist. We followed up on the patient over the next 18 months. After 6 months, vaginal burning, pain during sexual intercourse, and difficulty with urination slowly resolved, and by 18 months the treatments had resulted in almost complete resolution of vulvar pain. Her quality of life (DLQI) had also improved significantly, as had her STAI and BDI-II results. Her STAI state raw score was 40 (centile rank 82) and trait raw score 29 (centile rank 39), and her BDI-II score was lower than at initial testing (7, or not depressive).

Discussion

Vulvodynia is a complex disorder that presents a therapeutic challenge. Therapy includes general measures as well as pharmacologic, non-pharmacologic, and surgical treatments (1). Although there are many vulvodynia treatment options, none are reliably effective. Recently, acupuncture has been recommended by many physicians to help alleviate vulvar pain (6, 7). Acupuncture is a good choice because vulvodynia is a type of neuropathic pain that is best treated with co-analgesics. They act through com-

plex mechanisms, most commonly involving the inhibition of two neurotransmitters, norepinephrine, and 5-hydroxytryptamine, which are involved in the transmission of painful stimuli. One of the mechanisms of acupuncture is precisely the release of norepinephrine and 5-hydroxytryptamine. In our patient, small doses of co-analgesics (to avoid side effects) were combined with acupuncture to produce this effect.

According to the results of a randomized controlled pilot study on acupuncture use in vulvodynia treatment involving 18 patients and a total of 10 sessions, acupuncture led to reduced vulvar pain and dyspareunia and improved sexual functioning (6). A different study that included eight women with provoked vestibulodynia, who underwent a total of 10 acupuncture sessions, showed a significant decrease in pain and improvement in perceived sexual health and mental wellbeing (7). Similarly, in our patient, acupuncture therapy combined with other therapy and a multidisciplinary treatment approach led to an excellent outcome, which was confirmed by patient-reported questionnaire results.

Our patient's experience corresponded with the literature data that vulvodynia patients are usually referred to three to five specialists without ever receiving an adequate diagnosis (8). Patients with vulvodynia should be managed by a multidisciplinary team, wherein the involvement of a psychiatrist is very important. At her first exam, our patient's QOL was significantly impaired and the condition strongly affected her wellbeing. She was also significantly anxious at the time (according to both her personality trait and temporary state scores). The high score for her temporary state can be attributed to her fear and worry about the condition. After 18 months, both results were lower than her initial scores, with the trait score being significantly lower. It indicates that our patient was no longer anxious generally in her life (meaning that anxiety as a personality trait was no longer being expressed), which we consider a great success because it significantly reflects our patient's personal life. She was still temporarily anxious (during testing), but less than initially, which could have been associated with the lingering fear of the condition. She completed the test the same day when she was at her psychiatric follow-up, and it could also reflect test anxiety in some way. When she completed the STAI and BDI-II again, although there was not a significant difference between the initial and final testing for the BDI-II, it is important to recognize that the patient's level of depression went from mildly depressive to not depressive, which is another indicator of her improved wellbeing. This represents an enormous subjective difference to the patient.

According to population-based studies, vulvodynia is commonly related to anxiety, depression, childhood victimization, and posttraumatic stress (9). Because vulvodynia can have a sig-

Table 1 | Diagnostic and therapeutic steps for a patient with vulvodynia.

	Initial	After 3 months	After 6 months	After 12 months	After 18 months
DLQI (values)	18	13	–	–	9
BDI-II (values)	10	–	–	–	7
STAI (values)	S-c 99, T-c 73	–	–	–	S-c 82, T-c 39
Anesthesiologist	One acupuncture treatment	Nine acupuncture treatments (total)			
Gynecologist/Urologist	Normal gynecological findings, avoiding sexual intercourse, urinary infection	Normal gynecological findings, sexual discomfort, urinary infection	Normal gynecological findings, painless intercourse, no signs of urinary infection	Normal gynecological findings, painless intercourse	
Psychiatrist	Amitriptyline (25 mg daily)	Amitriptyline (50 mg daily)	Amitriptyline (50 mg daily)	Amitriptyline (50 mg daily)	Amitriptyline (50 mg daily)

DLQI = Dermatology Life Quality Index, BDI-II = Beck Depression Inventory II, STAI = State-Trait Anxiety Inventory, S-c = state anxiety centile, T-c = trait anxiety centile.

nificant impact on quality of life, emotional and psychological support is invaluable (1, 8). Taking into account different aspects of a patient's findings and condition-related problems (urogenital infections, psychological factors, and gynecological discomfort) could be crucial for the outcome of the condition (10–14), as was the case for our patient, for whom many specialists were involved in the successful management of her condition.

Conclusions

A multidisciplinary and holistic approach to our patient was key

for a proper diagnosis, effective treatment, and a good outcome. It was essential to see beyond the various symptoms with modest objective findings and to look at the patient as a whole to recognize the problem. Taking into account the patient's psychological status and available emotional and psychological support was crucial for her good outcome. Targeted psychiatric treatment, combined with acupuncture and support by a gynecologist and dermatologist, led to a major improvement in her symptoms and quality of life.

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