

MANAGING POSTMENOPAUSAL DYSPAREUNIA: Beyond Hormone Therapy

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Welcome to *The Female Patient's* new department, "Sexuality Matters." Sexuality and sexual health for the female patient throughout the lifecycle is an exciting and dynamic frontier. Research is now focusing on many aspects of female sexual response, and based on these findings, pharmaceutical companies are developing therapeutics to help women with these distressing conditions. In this column, we will examine the complex and multifaceted nature of female sexuality, along with the the biologic and psychosocial etiologies and treatments of sexual complaints. Emerging therapies and cutting-edge sexual medicine will also be highlighted. In addition, we will attempt to dispel some common sexual myths and tackle the more controversial and difficult topics associated with sexual health and dysfunction. Presented here, our debut column addresses the diagnosis and treatment of postmenopausal dyspareunia—a problem to which many women resign themselves without ever consulting their physician.

We encourage our readers to become active participants—to ask difficult questions, share challenging cases and treatment experiences, and suggest topics that should be covered! We want the column to be dynamic and informative, because *sex matters*. It matters to you the physician providing care, to your clinical practice, and to your patients.

Michael L. Krychman, MD
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The clinical presentation of dyspareunia is often perplexing; patients may be difficult to assess, and positive clinical findings are not always observed on standard gynecologic examination. Adding to the confusion, the American Psychiatric Association's *Diagnostic and Statistical Manual* defines dyspareunia as a sexual condition rather than a pain disorder, implying a psychogenic origin.^{1,2} Painful intercourse may correlate with sexual problems (ie, lack of libido, arousal, and orgasm), but it cannot be presumed that concurrent sexual problems are causal as opposed to resultant.^{3,4}

In the premenopausal population, the incidence of dyspareunia is estimated at 15% to 20%,^{5,6} and the most common cause is vulvar vestibulitis syndrome. Approximately 25% of postmenopausal women have some degree of dyspareunia.⁵ Although dyspareunia in this population is generally attributed to vaginal dryness and mucosal atrophy secondary to loss of ovarian hormones,⁷ prevalence studies suggest a decrement in all aspects of female sexual function associated with midlife.⁸ The reduction in ovarian estrogen results in a decline in vaginal lubrication, atrophic vaginitis, and decreased blood flow and vasocongestion with sexual activity. This leads to genital changes including ischemia, thinning skin, and decline in size of the interoitus, labia, vagina,

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and clitoris.⁹ Reduced testosterone levels have been implicated in genital atrophy as well.^{10,11}

However, the relationship between atrophy and dyspareunia has not been firmly established.¹² While use of systemic and/or local hormone therapy (HT) effectively treats vulvovaginal atrophy and dryness, such treatment does not correlate with substantial improvement in dyspareunia.^{13,14} Therefore, dyspareunia in postmenopausal women should be assessed carefully to determine the specific cause(s) and provide appropriate treatment.

HISTORY

The first step is to identify the source of the pain. This requires ruling out infection, disease, and any other medical or surgical condition that may contribute to dyspareunia—eg, gastrointestinal disorder,¹⁵ cancer treatment,^{16,17} or an overall chronic pain syndrome. Regardless of local or systemic pathology, it is also necessary to exclude possible mechanical, dermatologic, hormonal, musculoskeletal, neurologic, and psychosexual influences as well.

It is important to ask specific questions about the nature of

the dyspareunia pain—burning versus aching, diffuse versus local, spontaneous versus provoked—as this reflects its somatic, visceral, or neuropathic origin and will help direct physical examination and treatment. Other clues include the point at which pain occurs and whether it is superficial or deep, coincides with arousal or orgasm, and can be alleviated. It should also be noted whether the patient experiences this pain with nonsexual activities, such as a gynecologic examination (including insertion of a speculum), wearing tight pants, or sitting for long periods.

The history should also cover pain provocation related to penetration of any kind. While tampon use is irrelevant in the

postmenopausal patient, a history of pain or difficulty with past tampon use may indicate a more chronic condition. Finally, while dyspareunia assumes pain with penile-vaginal intercourse, it may be a source of distress as well for women involved in same-sex relationships, where touch and/or finger or object penetration is uncomfortable.

PHYSICAL EXAMINATION

The vulva should be examined for redness, atrophy, or scarring. Scar tissue from a past tear or episiotomy, traumatic delivery (eg, vacuum or forceps), or surgery can cause difficulty in association with trophic changes. Attempting to locate and reproduce the pain by touch can help to localize the problem. In addition to a standard gynecologic assessment—ie, bimanual and speculum examination—external and internal assessment should focus on pelvic and vaginal muscular tone and strength, as well as mobility and integrity of the fascial and connective tissue (Table 1). Identifying these components validates the patient's pain, and can direct specific mechanical treatment such as therapeutic exercise, massage, stretching, and introital dilation. Referral to a physical therapist trained in

TABLE 1. Physical Examination

- Observation of the vulva, perineum, and anus to note atrophy, reddened/raised areas, scar tissue, or edema
- Palpation for areas of tenderness to touch
- Internal examination to assess pelvic-floor muscle tension, connective tissue integrity, introital flexibility, and mucosal dryness/atrophy
- Determination of integrity of the pelvic organs and possible prolapse of the bladder, uterus, or rectum
- Anorectal examination, if necessary

assessing pelvic-floor muscle and fascial disorders may be helpful for evaluation.

DIAGNOSIS

Urogenital and Pelvic-floor Dysfunction

Comorbid symptoms or related conditions may contribute to dyspareunia. The incidence of urogenital problems (eg, prolapse, incontinence) is very high in the postmenopausal population, and these conditions correlate strongly with sexual dysfunction.^{18,19} Patients with urinary incontinence are likely to have pelvic-floor hypotonus dysfunction, which may cause pain on deep penetration due to lack of pelvic stability. Hypertonic or dyssynergic pelvic-floor muscles—common with urinary frequency, constipation, and vaginismus—are associated with pain and friction, particularly superficially. The presence of organ prolapse may contribute to painful intercourse as well.²⁰ A history of pelvic or gynecologic surgical procedures may be extremely relevant, as these procedures may cause dyspareunia by shortening the vagina.²¹

Asking the right questions may reveal that the dyspareunia is part of a constellation of symptoms indicative of a more ominous chronic pain syndrome. Dyspareunia with significant complaints of chronic, spontaneous, unprovoked vulvar pain is characteristic of vulvodynia; with chronic pelvic pain and urinary frequency and urgency in the absence of urinary tract infection, dyspareunia may indicate interstitial cystitis. Discovering such links not only helps to direct the physical examination, but

also suggests the need for additional treatment options, including pelvic-floor rehabilitation.

Musculoskeletal Dysfunction

Conditions such as arthritis, joint pain (particularly hip and lumbar pain), myofascial pain, fibromyalgia, or simply tight muscles

may contribute to vaginal or pelvic pain with intercourse. This can occur due to radiation of pain from trigger points in the trunk, buttocks, or pelvic-floor muscles, or to a more complicated entity such as pudendal nerve entrapment. Chronic pelvic pain or abdominal and vulvar scars/adhesions may be contributors as well, and may respond to manual treatment such as physical therapy (PT).

Psychosexual Influences

Patients may not volunteer information about dyspareunia, but may react with pain to speculum examination. Obtaining a sexual history may prevent such awkwardness while also legitimizing discussion of these issues. In older women, for whom gynecologic examinations may be infrequent, questions regarding current sexual activity and anticipation of pain during the examination are important, as decreased frequency of intercourse may indicate dyspareunia secondary to disuse atrophy. Thus, current marital status, partner illness or disability, and resumption of

Key Points

- Although postmenopausal dyspareunia is traditionally attributed to vulvovaginal atrophy, it may result from multisystemic causes, and the source(s) of pain must be identified.
- Management of postmenopausal dyspareunia requires a detailed history to determine possible contributors and direct the physical examination and treatment approach.
- The physical examination should include evaluation of the mobility and integrity of the pelvic and vulvar musculature, fascia, and connective tissue.
- Treatment should be multidisciplinary, and include pelvic-floor physical therapy and sexual counseling.

Asking the right questions may reveal that the dyspareunia is part of a constellation of symptoms indicative of a more ominous chronic pain syndrome.

intercourse after a period of inactivity are all relevant. Lack of or infrequent penetration affects the mucosa, connective tissues, and elasticity of the pelvic-floor muscles and fascia, which actually lose cells and decrease in size, contributing to stenosis of the vaginal introitus.

Questions about the partner's sexual function are relevant as well. While the advent of phosphodiesterase type 5 inhibitors to treat male erectile dysfunction (ED) has reportedly increased sexual satisfaction in female partners,²² female sexual function may be overlooked in addressing male ED. In men who have had ED for an extended period before seeking treatment, the desire and physical capacity of their postmenopausal partners to resume intercourse may be neglected. Timing is another factor, as the woman may need to accept penetration before she is sufficiently aroused and lubricated in order that her partner does not lose his erection or to prevent premature ejaculation. Dyspareunia may also occur when intercourse is prolonged due to the male partner's difficulty maintaining an erection during intercourse or delayed ejaculation. It is essential to explore these aspects of sexuality and their influence on dyspareunia, indicating a need for sexual counseling from the physician or referral to a certified sexual counselor or therapist.

TREATMENT

Topical or systemic HT is usually the first line of therapy for dyspareunia. When this is insufficient or inappropriate, however, a team approach combining PT with sexual counseling is indicated. There is an

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important role for PT in the treatment of dyspareunia (Table 2),²³ with modalities including local tissue desensitization, topical vitamin E oil, local massage, stretching exercises, pelvic-floor rehabilitation, biofeedback, and electrical stimulation. Manual techniques such as massage, stretching, and scar-tissue release are applied directly at the pelvis and vulva. Pelvic-floor exercises and biofeedback are provided to facilitate normal muscle tone and strength.

TABLE 2. Physical Therapy Intervention

- Setting of treatment goals with patient
- Home program of exercise, behavior modification, and gradual dilation
- Manual therapy
- Exercise
- Biofeedback
- Electrical stimulation

The goal of treatment is to improve sexual response and function by increasing blood flow and introital flexibility and reducing pain. Dilators may be used to help overcome penetration anxiety and stretch the vaginal opening. Patients are given very specific guidance, including positions that facilitate introital opening. Perineal dilators (designed for pre-delivery perineal stretching to avoid episiotomy) are useful in this regard. Additional options include sexual therapy and/or couples counseling to address both personal and relationship issues such as the effect of aging on desirability and libido, partner dysfunction, and changes in the relationship. Alternatives to standard sexual intercourse may also be explored to promote more fulfilling and satisfying intimacy.

CONCLUSION

In addition to interfering with sexuality and relationships, dyspareunia can affect many areas of a woman's life beyond sexual activity. Postmenopausal women who complain of dyspareunia, or who have difficulty undergoing a gynecologic examination due to pain and/or atrophic vulvovaginal changes, should be evaluated thoroughly and provided with multidisciplinary treatment options.

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