Maintaining Sexual Health After Menopause

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The sexual problems of older men have been addressed with a host of pharmacologic, mechanical, and surgical interventions. However, no treatments are offered specifically for the sexual problems of older women. Research on women's sexuality lags 20 years behind that for men, even though sexual dysfunction is more common in women (43 percent) than in men (31 percent) (1). This column discusses the biologic changes in sexual functioning that accompany aging and the clinical evaluation and treatment of the postmenopausal woman, including psychosexual therapy and the use of pharmacologic agents.

The sexuality of older women is perhaps the most neglected area of human sexuality. Kaplan (2) concluded, on the basis of a detailed sexual history from individuals and couples aged 50 to 92, that if older persons' health remains intact, their sexual functioning will be preserved until the end of life. Approximately 70 percent of healthy 70-year-olds remain sexually active, engaging in sex at least once a week. Contrary to popular belief, sexual functioning is "among the last of our faculties to fall prey to the aging process" (2).

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Biologic changes in sexual functioning

The process of aging brings about a dampening of sexual functioning in both men and women. The biologic changes that accompany aging across the female sexual response cycle can be summarized as follows (1).

Desire. The effect of aging on sexual desire varies a great deal from person to person, depending on such factors as general and mental health and the state of the relationship. Adequate levels of testosterone are essential for sexual desire in women as well as in men.

Sexual excitement. Diminished estrogen in postmenopausal women can lead to vaginal dryness and atrophy, as well as a diminution of lubrication and a reduction in sexual responsivity. Estrogen supplementation may enhance sexual functioning by restoring the integrity of vaginal tissue and making a woman feel and look more sexually attractive. However, it can also inhibit sexual functioning by limiting the availability of free testosterone (3). In addition, age-related changes in peripheral nerves, blood vessels, and muscle tissue probably also affect sexual functioning in women as they do in men.

Orgasm. If hormone levels and general health are normal, the orgasmic reflex in older women is preserved. Older women remain capable of multiple orgasms, but they may fatigue sooner than when they were younger, and sensation may be lessened. In addition, achieving orgasm usually requires a longer duration of physical stimulation for older women.

Clinical evaluation for sexual dysfunction

In evaluating the older woman with sexual dysfunction, an experienced clinician would obtain a detailed sexual history that encompasses the following elements as described by Kaplan (4).

History of the chief complaint. When the problem began, how it developed (gradually or suddenly), and what factors make it better or worse.

Sexual status examination. A detailed account of the patient's behavior, emotional reactions, and thoughts from start to finish during a recent sexual experience both with a partner and without.

Complete medical history. Illnesses, trauma, surgery, or medications that might interfere with sexual functioning, including neurologic disease, gynecologic problems, hypertension, diabetes, chronic pain, excessive alcohol consumption, cigarette smoking, and thyroid or testosterone deficiency. Medications that inhibit sexual functioning include some antihypertensives, sedatives, tranquilizers, ulcer medications, glucocorticosteroids, antihistamines, and most antidepressants. Often it is advisable to obtain screening laboratory tests such as serum chemistry levels, blood count, thyroid screen, and levels of glycohemoglobin A_{1c}, prolactin, estrogen, follicle-stimulating hormone, and free and total testosterone.

Circulating androgen levels decline continuously as women age and more precipitously after bilateral oophorectomy or chemotherapy. Even women undergoing partial hysterectomy whose ovaries have been spared may experience diminished ovarian functioning as a result of surgical trauma. Although estrogen, with or without progesterone, is effective in reversing some menopausal symptoms, it often does not restore sexual functioning.

Women with clinical symptoms whose free testosterone levels are in the low third of the normal range or

whose ratio of total testosterone to sex hormone–binding globulin (SHBG) is low (5) are most likely to respond to testosterone supplementation. The normal range for testosterone in women is .7 to 2 pg/ml unbound or free, and 25 to 70 ng/dl total (bound and unbound). Symptoms of testosterone deficiency include diminished sexual desire and fantasies; reduced sensitivity to stimulation of the nipples, vagina, and clitoris; and the inability to become aroused and to achieve orgasm. When orgasms occur, they are briefer, more localized, and less pleasurable (6). Testosterone deficiency also may cause a diminished sense of well-being as well as a loss of muscle tone and pubic hair, genital atrophy, and dry skin (3).

Psychiatric history. Psychiatric disorders are commonly associated with sexual dysfunction. For example, depressed patients experience loss of libido. Many antidepressants can further inhibit sexual functioning; exceptions include bupropion (Wellbutrin), mirtazapine (Remeron), nefazodone (Serzone), and trazodone (Desyrel).

Psychosexual history and family, cultural, and religious background. Information about the patient's family of origin, including birth order, sexual attitudes, religious affiliation, and cultural background, may contribute to understanding the origin of the sexual problem. Early sexual memories and sexual functioning as a young adult and before, during, and after marriage are relevant, with particular attention to postpartum and perimenopausal periods.

Relationship history. Whether the patient's romantic relationships follow any consistent pattern is relevant. The clinician should also consider the quality of the patient's relationship with her present partner, if she has one, with respect to affection, communication, sexual attraction, hostility, time availability, and stress.

The clinician can then assess to what degree inadequate sexual stimulation, inappropriate expectations, and medical, intrapsychic, and relationship factors contribute to the sexual problem. The patient should also be informed about what to expect from treatment in terms of prognosis, time, cost, and commitment (4).

An overall loss of sexual functioning and desire in all phases of the sexual response cycle suggests testosterone deficiency or other organic causes, whereas problems confined to specific situations or to only one phase of the cycle, such as sexual desire, are more likely to involve emotional conflicts or personal relations. Specific sex therapy, as described below, would be most appropriate for a woman with a psychogenic sexual problem that has been present throughout her adult life. If a relationship problem appears to be the cause, then individual and conjoint sessions with the woman's partner are indicated. However, many older women who do not have a partner can benefit from medical and psychotherapeutic interventions that can promote solitary sexual activity if they have an interest in it.

Treating sexual dysfunction in menopausal women

When testosterone deficiency appears to be the cause of sexual dysfunction, low dosages of testosterone can restore functioning. Studies show that women who receive both supplemental estrogen and testosterone after a total hysterectomy have greater libido than those given either estrogen alone or a placebo (7).

The genital tissue may be unresponsive to supplemental testosterone at first because of atrophy or a lack of testosterone receptors (3). Therefore, it is often preferable to begin by applying testosterone or methyltestosterone directly to the vulva once a day in a cream base. After a week or two the cream should be applied to the inner thigh or wrist five days a week, alternating with the vulva twice a week, at a dosage of .25 to 1 mg per day (Roentsch G, personal communication, Dec 1999). Some patients prefer to switch to either a fraction of a methyltestosterone pill designed for men a few times a week, a specially compounded methyltestosterone pill in dosages suitable for women (.25 to 1 mg per day), or a testosterone skin patch (Testoderm TTS) for men, which delivers 5 mg in a 24-hour period; women need to wear the patch for only one to four hours a day. Unlike methyltestosterone, however, testosterone itself has the advantage of allowing for the measurement of blood levels.

For women at risk for breast cancer who need to avoid estrogen intake, methyltestosterone taken orally is preferable because it cannot be converted as easily to estrogen as testosterone itself. In fact, some patients respond better to methyltestosterone than to testosterone, because testosterone stimulates the production of SHBG by virtue of its conversion to estrogen (Roentsch G, personal communication, Feb 2000). A combination pill of methyltestosterone and conjugated estrogens is also available (Estratest). Clinical experience has shown that if the response wanes after a few weeks or months, a two-week drug holiday may restore the hormone's effectiveness. Some women will need testosterone supplementation for the rest of their lives to maintain sexual functioning, whereas others may require it for a year or less.

Dosages should be kept as low as possible to avoid side effects, which may include not only enlargement of the clitoris but also weight gain, liver damage, reduced levels of high density (good) cholesterol, acne, irritability, and male secondary sexual characteristics such as facial hair, lowered voice, and male pattern hair loss. These side effects rarely occur at the low doses necessary for women. Information on long-term effects, optimal dosages, routes of delivery, and potential risks (including cancer and cardiovascular disease) are lacking, and research in these areas is urgently needed. Because female sexual dysfunction is not yet an approved indication for use of any form of testosterone, patients should sign consent forms and be monitored frequently.

Clinicians are beginning to administer other medications that have not yet undergone placebo-controlled studies in women with sexual dysfunction. In the media, anecdotal reports of the positive effects of sildenafil (Viagra) on women's sexual arousal abound. Preliminary studies suggest that postmenopausal women respond to sildenafil with heightened arousal and lubrication and an increased flow of blood to the vagina and clitoris (8). Some women who

hesitate to take a pill to enhance sexual functioning will accept the idea of using topical sildenafil cream (9). For women receiving testosterone supplementation, the occasional use of sildenafil may help to keep the dosage of testosterone at a minimum.

Other medications that have been noted in case reports to heighten female arousal when used topically include prostaglandin E_1 (10) and a combination of aminophylline, ergoloid mesylate, and isosorbide dinitrate (9). The same effect has been observed with the topical application of pentoxifylline, natural progesterone, dehydroepiandrosterone (DHEA) and L-arginine, individually or in combination (Roentsch G, personal communication, Mar 2000). In addition, a specific combination of herbs and spices first described 2,000 years ago in the Kama Sutra, the ancient Indian sexuality text, has recently been marketed as a topical aphrodisiac for women (ProSensual). Further information about these agents may be obtained on the first author's Web site (www.sensualrx.com).

Again, all of these medications and alternative substances have not been studied systematically for postmenopausal sexual dysfunction and are not routinely administered by sex therapists. Because these drugs are associated with side effects and are not FDA approved, patients using them need to be educated and monitored frequently.

The basic principles of sex therapy apply in the treatment of older women and their partners. Sexual problems that have a psychological component are best treated with specific psychosexual therapy after any physical causes have been addressed. Very commonly, sexual problems that begin with minor physical impairments or changes can escalate and lead to a progressive sexual disability.

For example, a woman at midlife may become less sexually responsive because of declining levels of hormones and reduced lubrication. For the first time in her marriage, she may have difficulty achieving orgasm through intercourse alone, and she is embarrassed about discussing it with her husband. He senses her lack of enthusiasm and finds it difficult to sustain an erection. He stops initiating sexual activity, which results in his wife's feeling rejected. In this way, a sexual problem that begins with subtle age-related biologic changes ultimately can lead to abstinence, diminished quality of life, depression, and, quite possibly, an affair or a divorce.

In addition, many women who previously relied passively on their husbands to bring them to orgasm by delaying ejaculation and prolonging intercourse need to learn to rely on other types of stimulation. Viewing adult videotapes portraying older couples engaging in a variety of sexual activities may enable receptive couples to vary their sexual repertoire (11). A new genre of these videos portrays sex in a more realistic manner designed to appeal to women (Femme Productions, Carrboro, NC).

Often, it becomes important for husbands to learn to be gentler, more patient, and more flexible in their approach to lovemaking. Although both men and women enjoy compliments, older women seem particularly sensitive to reassurance about their desirability. In addition, raising the level of sexual stimulation with vibrators, lubricants, and other sexual aids may be helpful. Many patients, unaware of recent improvements in lubricants, continue to use the inferior products they used in the past.

Other sex therapy techniques include sexual fantasy training, masturbation exercises alone and with a partner, taking turns giving and receiving sexual pleasure, identifying and overcoming cultural inhibitions, improving communication, and sensual massage. Treatment is best administered by clinicians trained in sex therapy. However, physicians without specialized training can do much to educate patients and guide them to self-help literature (12,13) and videos and to dispel harmful misconceptions.

Conclusions

Advances in the diagnosis and treatment of sexual disorders in older women are just beginning to be made. Given the vast numbers of women affected, a concerted research effort is past due. Some areas in particular need of further research include the physiologic changes that accompany aging, refinements in the diagnosis of sexual dysfunction in women, improved methods for measuring female sexual arousal, issues regarding testosterone deficiency in women, and methods of educating older patients about sexual changes and potential biologic therapies. ♦

Disclosure

Dr. Bartlik has been a speaker for Pfizer, the Apothecary, Bristol-Myers Squibb, Glaxo Wellcome, and Solvay.

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