Your Medication Information Service

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**Hot Topic: Sexual intercourse after vaginal application of estrogen**

**The North American Menopause Society advises application at least 12 hours prior to sexual activity to avoid estrogen absorption by a sexual partner. However, there are no data to support refraining from intercourse for a specific period of time to protect a partner from being exposed to the low dose of estrogen that is used intravaginally. (1) Alternatively a non-latex, non-rubber condom could be used to prevent exposure.**

**Review of vulvovaginal atrophy (VVA)**

**Pathophysiology:**

The vagina, lower urinary tract, and pelvic floor all contain estrogen receptors and undergo atrophy in the estrogen deficient state of menopause. This can lead to symptoms associated with VVA, such as lack of lubrication, dyspareunia, urinary frequency and recurrent urinary tract infections. The effect of estrogen loss on the urogenital tissues is relatively rapid and to some extent reversible with estrogen therapy, either systemic or topical. Treatment options include both hormonal and nonhormonal interventions. (2)

It is estimated that VVA affects 20% to 45% of midlife and older women. Although this condition can manifest with a number of symptoms, only a small number of women seek help. Of 500 Canadians participating in an anonymous survey, 52% were unaware of available, effective treatments and 59% claimed that their health care provider had never spoken to them about the subject of vaginal health. (1, 2, 3) In contrast to vasomotor symptoms that usually improve over time even without treatment, VVA can be progressive and are less likely to resolve without intervention. It can have a significant effect on a woman's sexual health and quality of life.(3)

**Non-hormonal treatment of VVA:**

Locally applied lubricants can alleviate dryness and even improve tissue elasticity but do not reverse the cellular tissue changes, improve the vaginal pH or reduce the lower urinary tract symptoms associated with urogenital aging.

Oral supplements containing black cohosh, evening primrose oil and dong quai have little reliable evidence for benefit over placebo.

Preliminary evidence from a small study indicated that women taking a vitamin D supplement for at least one year had improved maturation index of superficial vaginal wall cells compared to women who did not take vitamin D. Vitamin D therapy did not provide symptom benefit, but on examination there was less atrophy in users than in nonusers. This may suggest a benefit of vitamin D supplementation.
(2, 4, 5)

**Hormonal treatment:**
Estrogen loss alters the urethral and vaginal flora, resulting in a less acidic environment. The more basic tissue pH provides favourable conditions for colonization of the urethra and vagina with enteric bacteria, resulting in infection in susceptible women. Estrogen loss has been assumed to contribute to both urge and stress incontinence as well as tissue irritation and pain.

The North American Menopause Society and The Society of Obstetricians and Gynecologists of Canada recommend local vaginal estrogen therapy for urogenital atrophy. For symptoms that do not respond to the patient's satisfaction with nonhormonal interventions, low-dose vaginal estrogen therapy should provide greater benefit. (2, 3) Up to 40% of women receiving systemic therapy do not get an adequate effect of estrogen on the vaginal mucosa. (2)

Conjugated estrogen cream (Premarin Vaginal Cream®), an intravaginal sustained-release estradiol ring (Estring®) and low-dose estradiol vaginal tablets (Vagifem®10) are all available in Canada and are indicated for treatment of vaginal atrophy. Patient preference for dosage form may vary.

Routine progestin co-therapy is not required for endometrial protection in women receiving vaginal estrogen therapy in an appropriate low dose.

Because systemic absorption of vaginal estrogen is minimal, it can be used by women with contraindications to systemic estrogen therapy, including recent stroke and thromboembolic disease. There is currently insufficient evidence to recommend its use in women with breast cancer who are receiving aromatase inhibitors.

Very low doses are needed vaginally to reverse atrophy and to avoid systemic effects. However, when the vaginal mucosa is most atrophic is also when it is most permeable, so minor absorption may occur at the beginning of treatment until the mucosa matures and becomes less permeable. (2)

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