

# Vaginal Irritations Not Caused By Infection

Contributed by Andrew Goldstein, MD, Medical Director, ourgyn.com

Thursday, 31 July 2008

Last Updated Friday, 13 November 2009

If you have been diagnosed with one of the two best known non-infectious causes of vaginitis, atrophic vaginitis (AV) and desquamative inflammatory vaginitis (DIV), this article will explore symptoms & especially painful intercourse & causes, and, most importantly, treatment. Vaginitis is an inflammation of the vagina and can be caused not only by infections, as many women believe, but by other problems including natural hygiene problems.

These two conditions account for some 10 million gynecological office visits a year with up to 40% of postmenopausal women along with a number of peri-menopausal women seeking help. The term "atrophic vaginitis" describes vaginal atrophy due to low estrogen levels and can result in painful burning, itching, redness and dryness of the labia and vagina. You could easily see why it can lead to painful sex.

DIV is more of an inflammatory vaginitis, whose cause is not known and is considered rare yet, AV and DIV may cause similar symptoms, particularly vulvovaginal irritation, painful sex and a copious yellow discharge and irritative urinary symptoms. Symptoms are usually progressive and do not go away on their own. Vaginal bleeding may occur with severe atrophy [2].

Signs vary with the degree of atrophy. Loss of connective tissue substance results in shrinkage of the labia majora, (the outer lips). The labia minora (the inner lips) may disappear completely, and the opening to the vagina is often diminished. The vaginal dimensions decrease.

In general, the diagnosis is made by identifying characteristic changes on physical examination, noting an elevated vaginal pH and finding certain cells under the microscope. Interestingly, the degree of atrophic changes as measured by the microscope does not correlate with symptoms. Unfortunately, measuring serum estrogen levels does not aid in the diagnosis of atrophic vaginitis. Although the findings above establish an accurate diagnosis, symptoms alone dictate the need for treatment. Estrogen is the primary female sex hormone.

Remember, as atrophic vaginitis results from estrogen depletion and the majority of women with DIV have low estrogen levels, these two problems frequently share common characteristics. Nevertheless, these two conditions are clearly separate and your gynecologist will have to be sure of the diagnosis and how to treat.

## Vaginal Atrophy and Atrophic Vaginitis

While painful sex impacts up to 15% of perimenopausal women, it is what drives a larger number of postmenopausal women ---perhaps as high as 40%---to seek medical help. The painful sex often is attributed mainly to dryness resulting from vaginal atrophy. Surprisingly, however, only about 25% of symptomatic patients seek medical help.

As I have noted, vaginal atrophy results from inadequate estrogen levels in the vagina. This occurs most commonly with menopause and aging, but can result in younger women due to a variety of reasons, including lactation and nursing, usage of anti-estrogenic medications, occasionally, usage of extra-low dose contraceptive pills and cancer therapy.

During your reproductive years, estrogen plays a major role in maintaining the normal vaginal environment. These include a thickened, rugated vaginal surface, increased blood flow and lubrication, lactobacillus-dominant flora, and lower than 4.5 pH

With estrogen withdrawal during menopause, significant changes occur in the vagina, resulting in the tissue becoming pale, thin and less flexible. Blood flow diminishes, secretions decrease, and pH increases. Vaginal flora changes and these changes may affect a woman's well-being, particularly when it comes to sexual activity.

Although all menopausal women undergo the same hormonal changes, only 10-40% of them will become symptomatic. There is limited ability to predict which women will develop symptoms

## Sexual Dysfunction in Vaginal Atrophy

Data from the Yale Midlife Study indicated that 77% of menopausal women reported loss of sex drive, 58% had vaginal dryness, and 39% suffered from painful intercourse. Vaginal dryness causes increased friction during intercourse and the thin vaginal walls are fragile and are prone to damage with tiny capillaries breaking, ulcerations and tears with sexual activity.

With longstanding estrogen deficiency, the vagina also may become shorter, narrower, and less elastic. All of these changes increase the likelihood of trauma, infection and pain. Furthermore, changes occurring with aging can result in slower healing after injury. Lastly, age-related problems of the pelvic floor muscles can also contribute to painful intercourse.

In addition to the physical changes occurring with estrogen depletion, sexual dysfunction often is impacted by a falling-through-the-floor libido and decreased sexual arousal along with psychosocial factors.

In general, premenopausal women have enough lubrication, even in the absence of arousal, to be able to take vaginal penetration without pain. In contrast, vaginal engorgement and lubrication which accompanies sexual arousal may be decreased in patients with vaginal atrophy.

In postmenopausal women, painful intercourse may result from a pre-existing arousal disorder that was finally discovered by lack of estrogen. Psychosocial factors in this age group, including depression, anxiety, partner disability, poor overall health and changes in social status, can contribute to painful intercourse. Yet the "not tonight dear" avoidance of intercourse by symptomatic women may further contribute to vaginal shrinkage and loss of elasticity, which in turn can lead to additional barriers to future acts of sexual intimacy. Thus, it is essential that health care providers address both mind and body factors problems when treating patients with vaginal atrophy and sexual dysfunction.

### Treatment

Expert consensus opinion recommends non-hormonal vaginal lubricants and moisturizers, as well as ongoing sexual activity, as first line therapy for symptomatic vaginal atrophy. Regular coitus provides protection from atrophy, presumably by increasing the blood flow to the pelvic organs.

However, from a practical point of view, painful intercourse is difficult to sustain. Lubricants are useful for relieving dryness during intercourse and are preferred by women who do not want to or cannot use hormones. Few controlled studies have assessed their effect and their long-term therapeutic effect is undocumented.

The consensus of opinion is that estrogen therapy, both systemic and topical, gives a more complete response than lubricants and moisturizers. Estrogen that is applied topically is generally considered safer and often is more acceptable to the patient. The most common side effects include vaginal bleeding, breast pain, nausea, and perineal pain. With topical estrogen therapies, atrophic changes, including those observed with microscopy, rapidly and markedly often improve, but the doctor has to choose therapies on a case-by-case basis. The estrogen levels start dropping in perimenopause and are virtual all gone by menopause time (12 straight months without a period.) It happens virtually immediately with a hysterectomy with ovary removal. Discuss with your doctor about the Women's Health Initiative (WHI) and the risk and benefits of treatment.

There are a variety of options from which your doctor and you can choose from non oral estrogen replacement. These can include Vagifem, Estring, and Estrace cream, Premarin cream, EstroGel, and Evista among others.

It's important to remember that treating the vagina with estrogen does not necessarily treat the vulva and both may be treated with estrogen. Here is a brief description of these, showing their differences.

\* Estrace cream --- Estrace Cream is vaginal synthetic female hormone. It's smooth and creamy. It works topically to replace hormone levels in women who cannot produce enough hormones to offset menopause symptoms. Estrace is made from soy and is bioidentical

Estring --- Estring is a soft, flexible ring is placed in the upper third of the vagina. It releases estradiol for 90 days.

\* EstroGel --- EstroGel is a measured dose in a pump. EstroGel is a clear, colorless gel medicine that contains estradiol.

\* Premarin --- Premarin cream contains a combination of estrogens.

\* Vagifem --- Vagifem is a vaginal estrogen tablet, inserted with a disposable applicator.

### Desquamative inflammatory vaginitis (DIV)

DIV is an uncommon characterized by diffuse fluid-like inflammation of the vagina, profuse purulent discharge and painful intercourse, yet it has been rarely studied and much about this condition remains poorly understood. DIV in so many respects resembles atrophic vaginitis, although it appears in women with normal estrogen levels. It is clear that DIV is a separate entity from AV.

Although DIV is considered rare, it tends to be chronic and is encountered primarily in older women and more than a third were menopausal. Although most of these menopausal patients were receiving hormonal therapy when diagnosed by their doctor, many of them were not on hormonal therapy when the symptoms began.

Since the majority of patients are hypo-estrogenic, estrogen deficiency seems to play a role. However, a lack of estrogen alone does not seem to be the true cause of DIV since affected women do not improve with estrogen alone.

## Diagnosis

The most common signs of DIV are a copious purulent, yellow discharge. Among women suffering with DIV, 90% of sexually active patients complain of pain during intercourse. As DIV is primarily a vaginal condition, the pain occurs mainly with thrusting. However, when DIV causes vestibular inflammation or erosions, patients may have introital pain as well. Other symptoms include vulvovaginal burning and irritation.

The differential diagnosis (a diagnosis reached by eliminating less likely causes) for DIV includes other disorders causing purulent discharge. Purulent vaginitis can also result from usage of chemical irritants, such as the medicine fluorouracil for genital warts. Because of the similarities between AV and DIV, the two may be difficult to distinguish from each other.

## Treatment

There are no controlled studies of therapies for DIV. Treatment consists of either antibiotic or corticosteroid therapy. It is thought that the effect of clindamycin on DIV may be due to its potent anti-inflammatory properties.

Some gynecologists consider corticosteroids to be the drug of choice for DIV. The duration of therapy remains undetermined, and there are no additional published studies analyzing the response rates to various therapies in DIV patients. With both topical clindamycin and hydrocortisone, most experts will re-treat patients who relapse, generally with a longer course of therapy. I treat my patients with DIV with a combination of steroids, antibiotics and estrogen.

Finally, postmenopausal patients with DIV may show a less than optimum response because of associated AV. This can happen even in women receiving systemic hormone therapy. The addition of once- or twice-weekly intravaginal estrogen preparations is often helpful and may be required to maintain remission. (July 2008)