Dermatological Conditions of the Vulva

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DERMATITIS

Dermatitis simply means "inflammation of the skin," and at one time or another everyone experiences it. Dermatitis may occur anywhere on the body including the vulva and the vestibule. The characteristic sign of vulvar dermatitis is a red, tender vulva. There may be some short episodes of itching, occasionally intense, but most often vulvar dermatitis causes burning and pain with sexual activity, explaining why it may be mistaken for vestibulitis.

Contact Dermatitis: Fact and Fiction

Contact or primary irritant dermatitis (CD) is a common cause of vulvar burning. This condition is often puzzling to the clinician and its course of treatment varies among practitioners. When irritant dermatitis is suspected, many clinicians caution their patients not to expose the genital area to dyes and perfumes, since they are often irritants or allergens that can cause dermatitis. Whether dyes in toilet paper or clothing actually contribute to vulvar dermatitis is unknown.

However, it is reasonable for highly allergic patients (those with hay fever and seasonal allergies) to avoid certain hair dyes, perfumes and the usual list of so-called "allergic" but more often "irritant" substances. Although an occasional patient may find nylon undergarments irritating, they do not appear to constitute a problem for most women, except by increasing moisture in the vulvar area.

Irritant reactions either occur immediately upon exposure ("the medicine burned me") or after a short duration of use. Most irritant reactions at the vestibule subside within days, but some require several weeks.

Allergic reactions require prior exposure, i.e., the substance has been used before, and this time the reaction occurs after 48 to 96 hours of use. The patient will report a vulvar "flare-up" or worsening of vestibulitis or vaginitis when using the substance.

Generalized itching may also occur with true allergic episodes.

The most common sources of irritants are antifungal (anti-yeast), antibacterial and steroid creams. Specific irritating agents in these compounds have been identified and it is also reasonable to think that the drug in the cream or ointment (such as metronidazole) may damage the vulvar and vaginal surface as well. Vulvar and vaginal creams and ointments contain various preservatives, stabilizers, and delivery vehicles, to which many people "react".

Propylene glycol, a vehicle commonly used in topical and oral preparations, has been shown to be an irritant and an allergen in up to 12.5% of patients. Allergic sensitization has been shown through controlled oral provocation studies. When propylene glycol was ingested, a recurrence of dermatitis in previously affected areas was seen in close to 50 percent of patch test positive patients.

Skin or mucosal inflammation caused by irritants in creams usually takes the form of redness, swelling of the labia minora, superficial fissures "splits" in the skin around the vestibule.

Irritative symptoms consist of pain and burning at rest as well as introital dyspareunia (painful sexual intercourse). Repeated irritant exposure can lead to allergic sensitization. Both irritant and allergic dermatitis are frequent causes of recurrent burning and are possible predisposing factors for recurrent vaginal infections or vestibulitis.

The first step in treating local reactions is to attempt to identify the causative agent and eliminate its use. If the specific agent cannot be identified, all known irritant agents must be stopped and, if needed, replaced by hypoallergenic nonirritating moisturizing preparations, such as Crisco and hydrophilic (water-holding) preparations.

The behavior of "self-treatment" with over-the-counter anti-yeast products is believed to contribute to the development of vulvar dermatitis or vestibulitis.

The treatment of suspected or confirmed irritant reaction symptoms includes local measures. Oatmeal colloidal soaks used several times daily are soothing. Treating with sitz baths and soaks argues the old adage "dilution is the solution to pollution." Ice packs may be used liberally.

Frozen peas come in packages that can be placed on the vulva, providing a safe, convenient form of "ice pack". Milk compresses are sometimes used with success. A mild steroid (1%) ointment in petroleum may be used sparingly.

An aqueous, 4% Xylocaine solution (not viscous) may be also used for "numbing". The Xylocaine solution is not irritating and the patient does not become sensitized to it.

DERMATOSIS

All vulvar diseases that are chronic skin conditions, whether or not they cause the patient symptoms, are grouped into the category of non-neoplastic vulvar diseases called "dermatoses".

These include ulcerative conditions, abscesses, hair follicle disorders and myriad others. Vulvar dermatoses do not include new growths, e.g., cancer, pre-cancer, warts, and tumors. Dermatoses that affect the vulva also may be found elsewhere on the body. One example is lichen sclerosus, which has a predilection for the vulva but also is found on the back or arms thirty percent of the time. Similarly, lichen planus is a vulvovaginal dermatosis that also may be found on the arms and legs, or in the mouth and vagina.

LICHEN SCLEROSUS

Lichen Sclerosus (LS) is the most common vulvar dermatosis. LS is not a new growth, but an "epithelial" or skin disease.

LS may affect children and young adults but most commonly affects post-menopausal women. I have treated LS in children as young as five months and in women in their late eighties and nineties.

Regardless of age, patients who have LS will show some or all of the following signs: atrophy (thinning of the skin), white patches of skin, thickened areas and red-dark areas that appear to be a bruise. The vulvar skin typically exhibits marks indicating that skin has been scratched away (excoriation) or thickened areas resulting from rubbing. The most common complaints of LS patients are itching, burning, and painful sexual intercourse.

LS patients may have introital dyspareunia (painful intercourse) when the midline structures of the introitus (opening of the vagina) fuse, or if the introitus has lost its elasticity.

Superficial mucosal erosion and frequent fissuring (splits) occur with sex or other physical activities and produce burning or outright pain when the area is touched.

Fifteen percent of patients with LS have vulvodynia symptoms at initial examination. If left untreated, LS can result in fusion of the skin around the clitoris, atrophy and splitting of the vestibule, severe narrowing of the vaginal opening and, 'rarely', cancer of the vulva.

The patient examination must include a thorough search for islands of thickened skin or ulcers. Such areas within skin affected with LS may harbor coexisting abnormal cells that may be the first sign that cancer is developing. These areas must be biopsied.

Even though LS is classified as a dermatosis (not a cancer or pre-cancer), 'any' of the vulvar dermatoses that cause chronic irritation may predispose to the development of vulvar cancer, but the risk is small with proper care.

The treatment of LS no longer requires testosterone. Testosterone propionate, the mainstay of therapy for 30 years, has been replaced by clobetasol dipropionate. Clobetasol is clearly the drug of choice for patients with LS.

This very potent corticosteroid is used in thin applications twice daily for one month, then daily for two weeks.

Clobetasol ointment is used for maintenance therapy after symptoms are under control.

This medicine is so effective in treating LS that failure of Clobetasol to stop LS occurs in only 10 percent of patients.

"Flare-ups" may signal overuse of the medicine, yeast overgrowth or areas of abnormal cells (mentioned above).

Failure of Clobetasol to control LS may necessitate the injection of cortisone-like medicines into the LS skin. Surgery and laser are not acceptable treatments unless sexual intercourse is extremely painful due to LS, or if the patient begins to develop abnormal cells in areas of LS. The outlook for control of symptoms in patients with LS is excellent, but the condition must be treated over time (as with any dermatosis), until a cure is found.

LICHEN PLANUS

Lichen planus (LP), another dermatosis, can appear in several forms, the most distressing of which for women are erosions in the mouth, vestibule and vagina.

LP may appear as a red tender spot on the inner labia minora or vestibule, a visible white lesion, a small rash, or a purple rash.

Vulvovaginal LP rarely presents as the typical violet color, as it does on the flexor surfaces of upper extremities, or on the penile shaft.

When LP involves the hair-bearing skin of the vulva, the condition causes itching and a lesion that forms plaques. LP is likely when accompanied by "sore spots" of the mouth and a violet rash on the wrists or legs. The diagnosis of LP is often not even considered by clinicians if no oral or skin lesions accompany other vestibular and vaginal symptoms such as painful intercourse or a persistent yellow vaginal discharge. Over 70 percent of our patients with LP are between 30 and 60 years of age, but it can occur at any age.

LP is a cell-mediated immune response of unknown origin, i.e., an "autoimmune disease."

Vulvovaginal lichen planus, either on the hairy areas of the vulva (where it causes itching) or in the vestibule or vagina (where it causes burning and pain with sex), is seen in approximately one percent of all new patients at our clinic.

Approximately five percent of our patients between 30 and 60 years of age who are seen for a persistent yellow-sticky discharge have vulvovaginal lichen planus.

LP may also be subtle and easily mistaken for vestibulitis.

LP is suspected when white "lace-like" changes on the labial surface at Hart's line are seen with the colposcopy. In advanced cases, the vagina closes completely.

Topical and sometimes oral corticosteroids are used to treat vulvar LP.

If marked erosion is present, clobetasol dipropionate or other high potency steroids may be used.

Long-term maintenance with a low or mid-potency topical corticosteroid cream is required.

Vaginal dilation and vaginal cortisone suppositories are used to keep the vagina open. Sometimes surgery is required to open the vestibule or uncover the clitoris.

Supplemental estrogen, although seemingly indicated by the presence of thin vaginal tissue is not an essential ingredient of LP therapy unless estrogen-related atrophy coexists.

Dapsone, griseofulvin, and cyclosporine may be useful in some cases of LP, but results are variable and these drugs can be dangerous. Persistence of the vaginal disease is the rule.

With both lichen planus and lichen sclerosus, any thickened area or ulcer in the vestibule or vagina should be biopsied, because of the small risk of malignancy if the conditions are not adequately treated.

ATROPHY

Vaginal or vulvar atrophy is a condition that primarily affects peri-menopausal and postmenopausal women, but it can occur in women of all age groups. Atrophic vulvar and vaginal tissue is thinner, drier and less elastic than normal tissue. During menopause, atrophy is caused by the decreased amount of estrogens circulating in the body.

Surgical removal of the ovaries, Lupron, Depo-Provera eating and weight disorders, the postpartum period and lactation also may cause a decrease in estrogen and lead to vaginal atrophy with symptoms similar to vestibulitis.

All of these produce regressive functional changes in the minor vestibular glands and vestibular mucosa (just as they do at the cervix and endometrium), resulting in painful intercourse identical to "pure" vestibulitis.

During a pelvic examination, the physician must examine the walls of the patient's vagina to diagnose atrophy. A sample of vaginal cells or discharge that contains cells may be examined under a microscope to confirm atrophy. No blood tests are needed.

Signals that atrophy may be present include thinning of vaginal lining, a pale, smooth or shiny appearance of vaginal lining, loss of elasticity of skin and vaginal walls, loss of fullness of labia and vulva, dryness of labia, and loss of vaginal moisture.

Because low estrogen levels cause vaginal atrophy, the most common treatment is supplemental estrogen, either as a cream, pill or patch. Lubricants or moisturizers may also be helpful. If other medical conditions such as bulimia have caused atrophy, they must be addressed.

CONCLUSION

Careful differential diagnosis of vulvar symptoms is the key to successful treatment. "Dermatitis" reactions, vulvar skin dermatoses and atrophy are the main dermatological conditions that should be ruled out before a diagnosis of dysesthetic vulvodynia or vestibulitis is considered.