

Vulvar dermatoses: An NP's approach to benign skin conditions "down there"

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The author reviews diagnostic and management approaches to benign cutaneous conditions affecting the vulva that are commonly encountered in ambulatory women's health settings. Not all skin is created equal; vulvar skin is markedly more sensitive than skin on other areas of the body. In addition, the association with body image and sexuality can make a benign vulvar lesion or dermatitis anxiety provoking for patients. Nurse practitioners can perform assessments, prescribe treatments, and provide suggestions for improving quality of life for women who have contact dermatitis, atopic dermatitis, intertrigo, lichen sclerosus, or other benign asymptomatic lesions that are uncomfortable and/or worrisome.

Careful examination of the vulva and external genitalia is an important component of the well-woman gynecologic examination. Even though the vulva is the most visible component of the female genitalia, it is sometimes overlooked and, in fact, has been termed the *forgotten pelvic organ*.¹ Basic dermatologic inspection sometimes has lower priority than collecting the cervical cytology sample. Nevertheless, dermatologic complaints are among the most common reasons women see a primary care practitioner. Cutaneous disease is thought to account for 10%-15% of patient consultations with general practitioners.²

Vulvar skin is at particular risk for the development of dermatoses because it contains both keratinized and non-keratinized skin and because the vulva itself is a warm, moist environment often covered and/or exposed to friction. This milieu is ideal for the development of bacterial and yeast infections, contact dermatitis, and other immune-mediated dermatoses. Signs and symptoms (S/S) associated with these conditions (eg, pruritus, erythema, hyperpigmentation) are common and anxiety provoking, and can interfere with body image and sexual function.³⁻⁵

The approach to patients with a vulvar complaint is both comprehensive and sensitive. A pru-



ritic patch or new bump in the vulvar area, compared with a similar lesion on an arm or the scalp, may ignite heightened anxiety and stigma. With a keen eye, nurse practitioners providing routine gynecologic care can evaluate and prescribe treatment for women who have contact dermatitis, atopic dermatitis, intertrigo, lichen sclerosus, or other benign lesions that may be worrisome. Many curative interventions are as simple as vulvar care review and empathetic reassurance.

History and physical examination

All patients with vulvar complaints require a focused and detailed history (*Table 1*).⁶ NPs should pay special attention to patients' use of fragranced soaps or scented laundry detergent, hygiene practices, and grooming habits, which are frequently implicated in the etiology of vulvar dermatoses. In addition, NPs need to obtain patients' personal and family histories of autoimmune conditions, atopy, and other skin disorders. For example, NPs should inquire about a family history of genodermatoses (inherited genetic skin conditions) such as Darier's disease, metagerya, epidermolysis bullosa, and Harlequin ichthyosis.⁷

When assessing vulvar skin, NPs need to take a multidisciplinary approach—and remember that dermatology and gynecology are not mutually exclusive.⁸ Physical assessment of the vulva begins with noting the general color, texture, and turgor of the skin. Ample lighting is important when surveying the vulvar area because skin changes can

be as subtle as mild scaling or slight hypopigmentation. NPs need to pay special attention to papular lesions, patches, and plaques, as well as areas of inflammation, scaling, and atrophy. From morphologic and histologic standpoints, dermatoses present differently on mucosal versus non-mucosal surfaces. For example, herpetic lesions on cutaneous areas may present as a classic cluster of small bumps, whereas those on mucosal areas may be completely ulcerated and indistinguishable from an erosion or chancre. Furthermore, actions causing friction (eg, sexual activity, exercise) may alter the primary morphology of skin lesions.⁶

Providing a hand mirror can enhance patients' participation in the examination by allowing them to direct the clinician to the affected area. At the same time, this process can facilitate patients' understanding of their own anatomy and targeted areas of diagnosis and treatment.⁹

Contact dermatitis

One of the most common causes of vulvar pruritus is contact dermatitis. The vulva is inherently vulnerable to irritation because the barrier function of vulvar skin is substantially weaker than that of skin at other anatomic sites.^{10,11} Along with its compromised barrier function and hypersensitivity, vulvar skin is frequently subjected to caustic practices such as shaving, use of scented panty liners, and overzealous washing.

Contact dermatitis is divided into two categories, irritant contact dermatitis and allergic contact dermatitis^{12,13}; in women with vulvar complaints, the for-

mer is more common than the latter.¹³ In allergic contact dermatitis, the trigger induces an immune response, whereas in irritant contact dermatitis, the trigger itself directly damages the skin. In other words, an irritant substance is one that, if applied in sufficient concentration, induces an inflammatory reaction in everyone. By contrast, an allergic reaction is specific to an individual's hypersensitivity to a particular substance and thus always involves the immune system.

The most common contact allergens, which can be identified in individual patients by patch testing, include medications, preservatives, and fragrances.¹⁴ Many experts advocate avoidance of all topical vulvar hygiene products to decrease the likelihood of developing contact dermatitis.¹⁵ Patch testing, a technique used to ascertain whether a substance that comes in contact with the skin is causing inflammation, is used early in the therapeutic process rather than being reserved for patients who do not respond to treatment.¹³ Patch testing is performed by placing tiny quantities of allergens in direct contact with the skin and holding the allergens in place with special hypoallergenic adhesive tape. The test is done on an area of skin unaffected by the dermatitis. After 48 hours, the tape is removed and evaluated by a clinician, who knows that some reactions may be delayed. Patch testing can help confirm whether a substance is causing—or aggravating—a dermatitis. Patch testing is most commonly performed by dermatologists, although NPs with dermatology

Table 1. Components of the history for vulvovaginal complaints⁶

Chief complaint

- Change in pigmentation
- Change in vulvar anatomy
- Irritation
- Itching
- Lesion or skin growth
- Pain – burning, rawness, stabbing, stinging
- Redness
- Vaginal discharge

History of present illness

- Onset, duration, and course: stable, progressive worsening, progressive improvement
- Pattern: constant or intermittent
- Timing related to menstrual cycle
- Severity of symptoms on scale of 0 to 10 or mild, moderate, severe
- Alleviating factors: abstaining from sexual activity/intercourse, avoiding certain physical activity/exercise, bathing, sitz baths/soaks, use of topical medications and products, use of systemic medications
- Exacerbating factors: friction, heat, moisture, physical activity/exercise, pressure, sexual activity/intercourse, types of clothing or undergarments, urination, defecation, use of topical products
- Impact on activities of daily living: change in bathing habits; change in clothing styles; change in exercise, physical activities; change in sexual activity; interference with sleep
- Areas specifically affected: generalized or localized
- Hygiene practices: frequency of vulvar hygiene (per day, per week); product(s) used to cleanse the vulva (be specific – bar or liquid soap, brand, etc.); use of feminine hygiene products – douches, sprays, deodorants, colognes, perfumes (brand, frequency); use of lotions, creams, powders; use of panty liners – frequency of use, scented or unscented
- Previous treatment, including frequency, duration, and response

Menstrual history

- Presence or absence, frequency of menstrual periods
- Date of last menstrual period
- Use of panty liners, sanitary napkins (pads), tampons – frequency of use, scented or unscented
- Age at menopause
- If postmenopausal, past or current use of hormone replacement therapy (local, systemic)

Obstetric history

- Pregnancy history: total, premature births, miscarriages/abortions, live births
- Vaginal delivery or cesarean section
- Obstetrical interventions: forceps delivery, vacuum-assisted delivery, episiotomy

Sexual history

- Current sexual activity
- Methods of birth control/contraception
- Use of lubricant (product brand and formulation)
- Number of sexual partners (past 3 months, past 1 year, past 5 years)
- Pain or discomfort with intercourse
- Impact of vulvovaginal condition on sexual activity

Past health history

- Allergic: hay fever, environmental allergies, asthma
- Dermatologic: eczema, contact dermatitis, psoriasis, lichen planus, vitiligo
- Endocrinologic: diabetes mellitus, thyroid disease
- Gastrointestinal: anal fissures, irritable bowel syndrome, inflammatory bowel disease
- Gynecologic: abnormal Papanicolaou smear, endometriosis, genital warts, genital herpes, HIV, other sexually transmitted infections, pelvic inflammatory disease, frequent vaginal yeast infections
- Neurologic: back injury/back pain, chronic pain, migraines, other neurologic disorder
- Psychiatric: depression, anxiety
- Rheumatologic: autoimmune disease, chronic fatigue syndrome, fibromyalgia, arthritis
- Urologic: frequency, urinary tract infections, interstitial cystitis

Past surgical history

- Abdominal, pelvic, or spinal surgery
- History of trauma (motor vehicle accident, fall, pelvic fracture, etc.)

Allergies to medications

Family history

- Dermatologic: eczema, psoriasis, blistering disease, genodermatoses
- Endocrinologic: diabetes mellitus
- Rheumatologic: rheumatoid arthritis, lupus, fibromyalgia

Review of systems

- Constitutional: fever, chills, night sweats, unexpected or unexplained weight loss
- Ocular: eye discomfort, pain, eye irritation, chronic dry eyes, blurry vision, change in vision
- Otolaryngologic: nasal sores, epistaxis, mouth pain/soreness, oral ulcers, bleeding gums, pain with chewing or swallowing
- Gastrointestinal: abdominal pain or cramping, bloating, nausea, vomiting, constipation, diarrhea, pain with bowel movement, blood in stool, fecal incontinence, anal fissures, hemorrhoids
- Genitourinary: dysuria, urinary frequency, hematuria, urinary hesitancy, urinary incontinence
- Musculoskeletal: arthritis, joint pain, back pain, muscle problems
- Neurologic: numbness, weakness, headaches
- Psychiatric: depression, anxiety

Source: Schlosser BJ, Mirowski GW. Approach to the patient with vulvovaginal complaints. *Dermatol Ther.* 2010;23(5):438-448, Table 1. Printed with permission. © 2010 Wiley Periodicals, Inc.

experience are qualified to do this testing.

In vulvar contact dermatitis, the vulvar skin may appear mildly to severely inflamed, mildly to severely erythematous, and/or mildly to severely edematous, or it may manifest as scaling with thick lichenification from years of chronic rubbing. The area of vulvar involvement may be localized to a small site from deliberate contact or it may be generalized to the perineum and medial thighs.

The best, and only curative, treatment of contact dermatitis is to eliminate exposure to the offending agent. Therefore, comprehensive and specific questioning about hygiene practices and product usage is necessary. NPs review standard vulvar care with patients (*Table 2*).^{16,17} Sitz baths in lukewarm water may be soothing; patients are advised to pat themselves dry (as opposed to rubbing themselves hard) with a towel after bathing.

Once the offending agent is identified and removed from the environment, topical corticosteroids may be used to reduce inflammation. These agents are carefully selected with regard to potency and vehicle, keeping in mind that gels and creams can be irritating because of extenders used in the formulations.¹⁰ Ointments, the best choice for treating vulvar dermatoses, may be kept in the refrigerator so that the application itself is cooling and palliative. When prescribing topical steroids, NPs must remind patients that although these agents are safe to use for 10-14 days (twice daily, as needed, for redness, flaking, and itching), long-term use may be asso-

ciated with cutaneous side effects such as atrophy, hypopigmentation, and telangiectasia.¹⁴

Therapy is important; otherwise, rubbing and scratching the irritated area can lead to an increase in discomfort and pruritus. Itching provokes scratching, which causes excitation of nerve fibers, which then intensi-

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fies the sensation (the itch-scratch cycle).¹⁸ If adequate relief is not achieved, another useful intervention to block the cyclical pattern is to recommend a sedating antihistamine at bedtime. Hydroxyzine 10 mg has been shown to be effective in alleviating vulvar itching.¹⁰ Patient education and follow-up are essential to optimize treatment and prevent recurrence of vulvar contact dermatitis.

Vulvar eczema

One-third to one-half of women's vulvar complaints stem from atopic dermatitis (eczema).^{19,20} Vulvar dermatitis can develop in isolation or as part of dermatitis in other areas of the body. S/S of atopic dermatitis include pruritus, burning, rawness, and stinging.¹⁴ S/S may be exacer-

bated by heat, sweat, stress, or menstruation.¹⁹ The diagnosis is clinical, based on a history of chronic vulvar irritation and pruritus. Excessive washing of the vulva by women who fear a lack of cleanliness often aggravates atopic dermatitis instead of relieving it. Patients must be reminded that the vagina is self-cleaning, and that overzealous washing is unnecessary and can lead to painful reactions.

Eczematous skin is especially susceptible to secondary infection and excoriation, which can cause variation in appearance and complicate the clinical picture. Bacteria can take advantage of the compromised barrier function and cause impetigo in the eczema. The trademark of impetiginized skin is honey-colored crust, but secondary infection may also present as pustules or fissures. Impetigo may be treated prophylactically or reactively with topical mupirocin ointment.¹⁷

Vulvar atopic dermatitis requires a two-fold treatment modality. A large part of treatment is patient education and behavior modification. Atopic dermatitis is considered endogenous because S/S arise inherently in the skin; they are not due to an exogenous irritant that can be removed from the environment (as is the case with allergic contact dermatitis). Although this condition lacks a cure, it can be ameliorated with proper skin care practices. S/S usually resolve after treatment with low- to medium-potency topical corticosteroid ointments such as triamcinolone acetonide 0.1% twice daily for 14 days, followed by a maintenance dose twice weekly after the flare has resolved.¹⁶

Table 2. Elements of vulvar care^{16,17}

- Discontinue exposure to offending agent (eg, fragranced soaps, lotions, douching, scented panty liners).
- Avoid products with multiple ingredients.
- Take lukewarm sitz baths. Pat dry.
- Use fingers (instead of a washcloth) and plain water to cleanse the area.
- Seal in moisture by applying petroleum jelly or steroid ointment as directed.¹⁶ Consider keeping this product in the refrigerator to make application more soothing.
- Use lightweight cotton underwear (go without when able).

Candidal intertrigo

Candidal intertrigo is an infection of the skin by *Candida albicans* that occurs between intertriginous folds of skin—commonly under the breasts, in between the legs, or in the groin area. Intertrigo presents as erythematous, macerated skin that is commonly pruritic and painful.²¹ The diagnosis of intertrigo is typically a clinical one, although microscopy can confirm it. A KOH preparation on a wet mount of skin scrapings shows hyphae and budding hyphae.²¹

Management of intertrigo begins by addressing predisposing factors to candidal infections. Predisposing factors include diabetes, obesity, and the wearing of tight clothing, which leads to chafing. A discussion regarding a low sugar and yeast diet is appropriate in these cases.²² Because *Candida* organisms thrive on simple carbohydrates, patients are encouraged to avoid foods such as white bread, processed food, and sugary snacks. Topical antifungals and low- to mid-potency topical corticosteroids may be used initially to decrease discomfort.^{22,23} Once the rash has cleared, ketoconazole 1% shampoo (available over the counter) may be used 1-2 times weekly for long-term management. Keeping the

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intertrigo-prone area as dry as possible can prevent subsequent flares. Use of talcum-based powders on thoroughly dried skin is helpful in warm humid weather.²⁴

Lichen sclerosus

Lichen sclerosus is a chronic immune-modulated dermatosis that can cause substantial discomfort and morbidity.²⁵ This idiopathic inflammatory skin disease has a predilection for the genital skin. Although most frequently seen after menopause, lichen sclerosus can present in women of any age group, on any part of the body. In typical cases, lichen sclerosus appears as well-defined white plaques with an atrophic wrinkled surface.²⁶ Longstanding disease can lead to labial shrinking, contributing to a *keyhole* or *figure of eight* appearance.¹⁵ Eczymoses, ede-

ma, fissures, and erosions may be present on the labia minora, labia majora, and surrounding anogenital skin.²⁷ Although lichen sclerosus can be asymptomatic, in many cases it is characterized by intractable burning pruritus²⁸ and dyspareunia.

The diagnosis of lichen sclerosus is a clinical one, based on the history and physical exam findings. If a biopsy is warranted for confirmation, NPs trained in performing a vulvar punch biopsy may collect a specimen. Referral to a gynecologist or dermatologist is required for refractory cases and/or if NPs are uncertain regarding the area from which the biopsy specimen is to be obtained.²⁹ The biopsy is done at the initial visit, before topical corticosteroid is applied; both clinical and histologic appearances can be modified by corticosteroid usage.¹⁵

First-line treatment for lichen sclerosus is a superpotent topical corticosteroid: clobetasol propionate 0.05% ointment twice daily for 3 months.³⁰ When caring for patients with lichen sclerosus, NPs must keep in mind that the speculum examination may be uncomfortable (due to introital narrowing) and that this disease can have an adverse effect on a woman's body image. Although lichen sclerosus is considered benign, it can be associated with squamous cell carcinoma. Therefore, teaching of self examination is imperative and regular follow-up visits are recommended.³¹

Conclusion

Not all skin is created equal. Vulvar skin is markedly more sensitive than skin found on other areas of the body.

Concerns are intensified in terms of the vulvar area because of its association with body image and sexuality. Providing anticipatory guidance by supplying patients with a hand mirror and routinely pointing out benign nevi, acrochordons (skin tags), and degree of pigmentation can prevent future stress. Reviewing standard vulvar care is one of the most important parts of a well-woman gynecologic examination. Having a basic understanding of the prevalence of dermatologic conditions in women's health and an understanding of dermatology terminology can make the diagnosis of a vulvar complaint a routine event. ●

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References

- Burrows LJ, Shaw HA, Goldstein AT. The vulvar dermatoses. *J Sex Med.* 2008;5(2):276-283.
- Kerr OA, Tidman MJ, Walker JJ, et al. The profile of dermatological problems in primary care. *Clin Exper Dermatol.* 2010;35(4):380-383.
- Harlow BL, Wise LA, Stewart EG. Prevalence and predictors of chronic lower genital tract discomfort. *Am J Obstet Gynecol.* 2001;185(3):545-550.
- Fivozinsky KB, Laufer MR. Vulvar disorders in adolescents. *Adolesc Med.* 1999;10(2):305-319, vii.
- Van Lankveld JJDM, Granot M, Weijmar Schultz WCM, et al. Women's sexual pain disorders. *J Sex Med.* 2010;7(1 pt 2):615-631.
- Schlosser BJ, Mirowski GW. Approach to the patient with vulvovaginal complaints. *Dermatol Ther.* 2010;23(5):438-448.
- Mann JA, Siegel DH. Common genodermatoses: what the pediatrician needs to know. *Pediatr Ann.* 2009;38(2):91-98.
- Gokdemir G, Baksu B, Baksu A, et al. Features of patients with vulvar dermatoses in dermatologic and gynecologic practice in Turkey: is there a need for an interdisciplinary approach? *J Obstet Gynaecol Res.* 2005;31(5):427-431.
- Huber JD, Pukall CF, Boyer SC, et al. "Just relax": physicians' experiences with women who are difficult or impossible to examine gynecologically. *J Sex Med.* 2009;6(3):791-799.
- Margesson LJ. Contact dermatitis of the vulva. *Dermatol Ther.* 2004;17(1):20-27.
- Britz MB, Maibach HI. Human cutaneous vulvar reactivity to irritants. *Contact Dermatitis.* 1979;5(6):375-377.
- Nosbaum A, Vocanson M, Rozieres A, et al. Allergic and irritant contact dermatitis. *Eur J Dermatol.* 2009;19(4):325-332.
- Nardelli A, Degreef H, Goossens A. Contact allergic reactions of the vulva: a 14-year review. *Dermatitis.* 2004;15(3):131-136.
- Beltrani VS, Beltrani VP. Contact dermatitis. *Ann Allergy Asthma Immunol.* 1997;78(2):160-175.
- McPherson T, Cooper S. Vulvar lichen sclerosis and lichen planus. *Dermatol Ther.* 2010;23(5):523-532.
- Green C, Colquitt JL, Kirby J, Davidson P. Topical corticosteroids for atopic eczema: clinical and cost effectiveness of once-daily vs. more frequent use. *Br J Dermatol.* 2005;152(1):130-141.
- Koning S, Verhagen AP, van Suijlekom-Smit LWA, et al. Interventions for impetigo. *Cochrane Database Syst Rev.* 2004(2):CD003261.
- Tran BW, Papoiu ADP, Russoniello CV, et al. Effect of itch, scratching and mental stress on autonomic nervous system function in atopic dermatitis. *Acta Dermato-Venereologica.* 2010;90(4):354-361.
- Ball SB, Wojnarowska F. Vulvar dermatoses: lichen sclerosis, lichen planus, and vulval dermatitis/lichen simplex chronicus. *Semin Cutan Med Surg.* 1998;17(3):182-188.
- Fischer G, Spurrett B, Fischer A. The chronically symptomatic vulva: aetiology and management. *Br J Obstet Gynaecol.* Oct 1995;102(10):773-779.
- Klenk A, Matin AG, Heffernan MP. Yeast infections: candidiasis, pityriasis (tinea) versicolor. In: Freedberg I, Eisen, AZ Wolff, K, et al, ed. *Fitzpatrick's Dermatology in General Medicine.* New York, NY: McGraw-Hill; 2003:2006.
- Hainer BL. Dermatophyte infections. *Am Fam Physician.* 2003;67(1):101-108.
- Hay RJ. The management of superficial candidiasis. *J Am Acad Dermatol.* 1999;40(6 pt 2):S35-S42.
- Scott TD. Patient handout: intertrigo. *J Dermatol Nurses Assoc.* 2010;2(5):226.
- van der Avoort IAM, Tiemes DEM, van Rossum MM, et al. Lichen sclerosis: treatment and follow-up at the departments of gynaecology and dermatology. *J Low Genit Tract Dis.* 2010;14(2):118-123.
- Welsh BM, Berzins KN, Cook KA, Fairley CK. Management of common vulval conditions. *Med J Aust.* 2003;178(8):391-395.
- Bradford J, Fischer G. Long-term management of vulval lichen sclerosis in adult women. *Aust N Z J Obstet Gynaecol.* 2010;50(2):148-152.
- Goolamali SK, Goolamali SI. Lichen sclerosis. *J Obstet Gynaecol.* 1997;17(1):5-12.
- Carlson JA, Ambros R, Malfetano J, et al. Vulvar lichen sclerosis and squamous cell carcinoma: a cohort, case control, and investigational study with historical perspective; implications for chronic inflammation and sclerosis in the development of neoplasia. *Hum Pathol.* 1998;29(9):932-948.
- Cooper SM, Gao XH, Powell JJ, Wojnarowska F. Does treatment of vulvar lichen sclerosis influence its prognosis? *Arch Dermatol.* 2004;140(6):702-706.
- Edwards QT, Saunders-Goldson S. Lichen sclerosis of the vulva in women: assessment, diagnosis, and management for the nurse practitioner. *J Am Acad Nurse Pract.* 2003;15(3):115-119.