1. Patient History

Utilizing a patient questionnaire tailored to your practice can facilitate and expedite the patient encounter (Table 1 — Information to Obtain from Patient). The interview should start with the patient’s defining her symptoms. This definition may be facilitated by offering a variety of descriptors, such as burn, rawness, pain, tingling, irritation, and itch. Next, define the location (unifocal, multiple areas, or generalized) and onset (chronicity, recurrence) of the symptoms, as well as any potentially relevant circumstances.

Review in detail the signs and symptoms at onset and their evolution over time. Ask the patient to identify potential triggers, anything that makes the symptoms better or worse, and previous similar eruptions. Clarify management prior to presentation, including: over-the-counter treatments, home remedies, and prescriptions; determine the length of use and the results of such treatments. Inquire about personal hygiene routines and products, including: cleansers, douches, use of washcloths and wet wipes, sanitary pads and tampons; determine how the products are used and how frequently. Review the patient’s sexual experience and travel history, including: gender of sexual contacts; new, anonymous, or high-risk partners; number of sexual contacts in last month and last six months; geographic location of sexual contacts; sites of sexual contact; history of previous sexually transmitted infections; and use of barrier protection.

Gather pertinent past medical history, including: allergies; over-the-counter and prescription medications, with emphasis on any changes in the six months prior to symptom onset; immune status; systemic disease; relevant surgeries; age of menarche; and last menstrual period. Conduct a directed review of systems, including: fever, fatigue, headache, muscle pain, nausea, vomiting, anorexia, abdominal pain, skin eruption/rash, oral lesions, pain with swallowing, vaginal discharge, pain with intercourse, pain with urination, cold or flu-like symptoms, eye irritation, blurred vision,
depression, and anxiety. Identify any pertinent family history of genital ulcers, Behcet’s disease, Crohn’s disease, and lupus or other autoimmune disease.

Physical Examination

The physical examination should include a whole-body mucocutaneous examination, focusing on the skin, eyes, oropharynx, anogenital areas, lymph nodes, and joints. Because vaginal disease can have great effect on the vulva, the vaginal mucosa should be included in the examination. A sample of the vaginal secretions should be studied microscopically for the presence of clue cells, lactobacilli, hyphae, pseudohyphae, or budding yeast. Inspect the entire vulva for ulcers, erosions, fissures, subtle erythema, friability, induration, edema, lichenification, crusting, atrophy, and hyper- or hypo-pигmentation, as well as the presence of scarring and loss of architecture. Document the number, type, size, border characteristics, depth, type of exudate if present, location, tenderness, and description of primary lesions, as well as the presence or absence of local lymphadenopathy and any extra-genital findings.

It can be difficult to ascertain the morphology of the primary lesion and specifically to resolve whether the primary lesion is an ulcer or erosion. Erosions involve loss of the epidermis only and often appear as deep red macules or patches. Ulcers are deeper than erosions and characterized by loss of both epidermis and dermis. On examination, an ulcer typically appears with a white or yellowish fibrinous base. Erosions can be transformed into ulcers by secondary infection, irritant contact dermatitis, rubbing, and other trauma. The primary pustule of candidiasis or herpes simplex virus (HSV) infection, the primary vesicle in an acute eczematous process (contact dermatitis), or the primary bulla in bullous diseases or drug eruptions will all eventually rupture, resulting in erosions and/or ulcerative disease. Furthermore, an ulcerative lesion that is partially treated or healing may appear to be erosion. Erosions usually heal without scarring, while ulcers, especially when large, deep or long-standing, will likely heal with scarring.
1a. Information to Obtain from Patient

Age, allergies, past medical history, past surgical history

List OTC and Rx medications as well as herbal and dietary supplements that you take daily

List OTC and Rx medications as well as herbal and dietary supplements that you take as needed only

List OTC and Rx medications as well as herbal and dietary supplements that were started in the last six months

List all products and treatments (OTC and Rx) that come into contact with your genital skin – cleansers, soap, washcloth, powders, moisturizers, sprays, wet wipes, creams, ointments, etc.

Describe your discomfort. Itch, rawness, soreness, burning, other?

When did your symptoms start?

Can you think of anything that might have triggered your symptoms?

Do any specific triggers make the symptoms worse, such as sexual activity, menstrual period, exercise, treatment? Does anything make the symptoms better?

Have you noticed any change in vaginal discharge?

What have you tried to treat your symptoms?

Have you ever had similar symptoms in the past? When? Treatment?

When was your last menstrual period? Menopause at what age?

What sanitary products do you use during you menstrual period? Panty liners, pads, tampons, scented vs. unscented?

Do you use any hormonal replacement? Oral, transdermal patch, intra-vaginal (cream, ring, suppository)?

Are you sexually active?

Do you have sex with men? Women? Both?

Do you have had sexual contact orally? Vulvovaginaly? Anally?

Do you use any lubrication products? What products?
Do you use any contraception? What type?

Do you use condoms? How often?

Have you had a new, anonymous, or high-risk sex partner?

Number of sexual contacts in last month? Last 6 months?

Have you, or your sexual partners, traveled outside the United States? Where?

Have you ever been told that you have or had any of the following: an abnormal pap smear, genital warts, herpes, shingles, gonorrhea, chlamydia, hepatitis, syphilis, HIV?

Are you currently experiencing any of the following: fever, fatigue, headache, muscle pain, nausea, vomiting, anorexia, abdominal pain, skin eruption/rash, oral lesions, pain with swallowing, vaginal discharge, pain with intercourse, pain with urination, cold or flu-like symptoms, eye irritation, blurred vision, depression, anxiety?

Does anyone in your family have a history of any of the following: genital ulcers, Behcet’s disease, Crohn’s disease, lupus or other autoimmune disease?
2. VULVAR ULCERS - Approach to the Patient /Evaluation/Work-Up

Vulvar ulcers are a non-specific finding with many potential causes. While the most common causes of vulvar ulcers in the United States are HSV and syphilis, the list of differential diagnoses in Box 1 (below) is purposefully comprehensive to emphasize the importance of a thorough assessment.

Initial screening labs for sexually active patients presenting with vulvar ulcers should focus on the common infectious causes and include diagnostic testing for HSV (via viral culture or polymerase chain reaction (PCR)), serologic testing for syphilis (via rapid plasma reagin), bacterial culture, yeast culture, pregnancy testing, as well as screening for human immunodeficiency syndrome as warranted. It is notable that HSV can be cultured from more than 90% of fluid filled lesions, while ulcerations can be cultured only 70% of the time, and only 27% can be cultured at the crusted stage. PCR is three to four times more likely to isolate HSV than is viral culture (6). Comprehensive care of sexually active patients with genital ulcers also includes screening for C. trachomatis, Neisseria gonorrhoea, HIV, and hepatitis B and C viruses, as many of these infections are asymptomatic.

Girls and women without history of sexual activity are typically screened in the same manner as sexually active patients due to concern of possible non-disclosure, misunderstanding of risk factors, and sexual abuse.

In cases of chronic or recurrent ulcers with negative screening for HSV and syphilis, additional evaluation and alternative diagnoses should be considered (7), such as serology for Epstein Bar virus, cytomegalovirus, and Mycoplasma pneumoniae. When the genital ulcers are unilateral and in a dermatomal distribution, testing for varicella-zoster virus should be added as well.

The other sexually transmitted infections that cause genital ulcers, chancroid, granuloma inguinale, and lymphogranuloma venereum, are all quite uncommon in North America and can often be eliminated by a careful travel and sexual experience history.

The interview will usually elicit historical clues that can focus the differential diagnosis on trauma, drug reactions, contact dermatitis, and graft versus host disease as the causative etiology. A biopsy is warranted when a dermatosis is suspected, for recurrent lesions without firm diagnosis, for any atypical findings, or for lesions suspicious for malignancy.

The best histologic findings will be found by biopsying the edge of the lesion, rather than the necrotic center. A wedge excision of the edge often gives the best information for the pathologist, but may not be feasible. Alternatively, two smaller punch biopsies may suffice. It is critical to send the specimen, as well as a summary of
the history and clinical findings and photo as able, to a pathologist with experience in both gynecologic pathology and dermatopathology. If a bullous dermatosis is suspected, refer the patient to dermatology for biopsy, to include standard hematoxylin and eosin as well as direct immunofluorescence.

While laboratory results are pending, symptomatic and supportive treatment should be directed toward pain relief, prevention of scarring, and specific treatment based on presumptive diagnosis.

1. Remove all irritants: soaps, over-the-counter (OTC) products, wet wipes, etc.
2. Counsel gentle vulvar skin care: using spray bottles with saline or voiding in the bath to reduce dysuria
3. Restore the skin barrier: petrolatum or zinc oxide barrier after soak
4. Administer pain control: lidocaine jelly 2% or lidocaine 5% ointment, NSAIDs, narcotics as warranted
5. Consider acyclovir if primary HSV is the likely diagnosis
6. Consider topical corticosteroid ointment if aphthous ulcers is the likely diagnosis
7. Consider oral antibiotics if bacterial infection is suspected
8. Consider consultation to dermatology as warranted

All patients who may have a sexually transmitted infection should be advised to refrain from sexual activity while awaiting test results. Counseling regarding partner/contact testing and condom use is key to decreasing potential transmission. Follow-up should be arranged within one week of the initial visit to assess the clinical response to therapy and review results of diagnostic testing.
2a. Differential Diagnosis of Vulvar Ulcers

INFECTIOUS

Sexually Transmitted
- Herpes simplex virus
- Syphilis
- Chancroid
- Granuloma inguinale
- Lymphogranuloma venereum
- Human immunodeficiency virus

Non-Sexually Transmitted
- Epstein Bar virus
- Herpes zoster (varicella-zoster virus)
- Cytomegalovirus
- Hand, foot, and mouth disease
- Candidiasis
- Bacterial infections (staphylococcus, streptococcus, Mycoplasma pneumonia)

NON-INFECTIOUS

DERMATOSES

Non-bullous
- Hidradenitis suppurativa
- Crohn’s disease
- Aphthous ulcers
- Behcet’s disease
- Contact dermatitis (allergic or irritant contact)
- Lupus erythematosus
- Pyoderma gangrenosum
- Graft versus host disease
- Lichen planus
- Lichen sclerosus
- Zoon’s vulvitis

Bullous
- Bullous pemphigoid
- Cicatricial pemphigoid
- Pemphigous vulgaris
- Linear IgA disease
- Hailey-Hailey disease
- Epidermolysis bullosa acquisita
TRAUMA
- Blunt, sharp
- Heat, cold
- Facticial
- Female genital mutilation

NEOPLASMS
- Basal cell carcinoma
- Squamous cell carcinoma
- Vulvar intraepithelial neoplasia
- Extramammary Paget’s disease
- Verrucous carcinoma
- Melanoma
- Lymphoma
- Leukemia
- Hodgkins

HORMONALLY INDUCED
- Autoimmune progesterone dermatitis
- Estrogen hypersensitivity

DRUG REACTIONS
- Fixed drug eruption
- Toxic epidermal necrolysis
- Erythema multiforme
3. RESOURCES discussed in lecture –


- Hidradenitis Suppurativa Foundation (hs-foundation.org)
- Hidradenitis Suppurativa USA (hs-usa.webs.com)
- International Society for the Study of Vulvovaginal Disease (www.issvd.org)
- Dr. Lynette Margesson, Dr. Elizabeth G. Stewart, et al. Vulvovaginal Disorders – an algorithm for basic adult diagnosis and treatment (http://vulvovaginaldisorders.com)
- Dr. Hope Haefner – http://obgyn.med.umich.edu/patient-care/womens-health-library/vulvar-diseases/information
4. REFERENCES