Conflicts of Interest and Disclosures

Hope K. Haefner, MD was previously on the advisory board of Merck, Co., Inc.

Colleen K. Stockdale, MD, MS
  Has nothing to declare relevant to this presentation

Libby Edwards
  Has nothing to declare relevant to this presentation
Learning Objectives

At the end of this presentation you will:

1. Assess your knowledge of vulvovaginal disease
2. Identify the clinical features of some difficult vulvovaginal conditions
3. Familiarize yourself with a variety of treatments for skin diseases

Written Information Available:

University of Michigan Center for Vulvar Diseases (Google)

Then, click on Information on Vulvar Diseases

http://obgyn.med.umich.edu/patient-care/womens-health-library/vulvar-diseases
University of Michigan Center for Vulvar Diseases

There are many reasons for seeing a vulvar disease specialist at the University of Michigan Center for Vulvar Diseases, treating not only part of the vulva, but also the skin around the vulva, and seeing a vulvar disease specialist at the University of Michigan Center for Vulvar Diseases offers a number of benefits. Our multidisciplinary approach allows us to treat women with vulvar diseases and disorders, from cutting-edge treatment options to education and counseling to meet every individual’s needs.

The Center for Vulvar Diseases was created in 1990 to better serve and treat women with diseases of the external genitalia. Our center is one of the few clinics in the country that specializes in treating these conditions. We focus on the multidisciplinary approach to help patients improve their health.

The team approach allows us to provide a higher level of care and expertise to women who have already demonstrated a reduced and chronic illness on an unscheduled basis.

Many women experience different forms of vulvar pain, including vulvodynia. Vulvodynia is a pain on the lips of the vulva or on vulval tissue with a normal appearing vulva. It is a burning, itching sensation. Some patients are unable to accept sexual penetration due to intense spasms and tenderness. Other conditions associated with vulvar pain include:

- Lichen sclerosus or lichen planus—chronic inflammatory skin disorders
- Vulvar intraepithelial neoplasia—premalignant condition, often associated with a virus, the human papilloma virus (HPV)
- Vaginal atrophy—disease of the amount and volume, with pain and fluid pockets of fluid
- Bartholin’s cysts—fluid filled cysts at the base of the female reproductive tract

ISSVA Vulvovaginal Surgery, February, 2015
- Surgical Management of Vaginal Opening & Laceration (PPT PDF)
- Current Lymphoedema & Surgery (PDF)
- Vulvar Surgery (PPT PDF)
- Pedoxology (PDF)

Congreso de las Américas en Colecistología, February, 2016
- Vulvar Disease Clinical Cases (PPT PDF)
- Vulvar Disease Clinical Cases Information (PDF)
- Vulvar Disease Clinical Cases Telephone number (PDF)
- Vegetable Savers (PPT PDF)
- The Oncologist’s Guide to Vaginal Surgery (PPT PDF)

- Société Latinoamericana de Patologia Vulvar, April, 2015
- The Literature Support for Vaginal Surgery (PPT PDF)
- The Literature Support for Vaginal Surgery (PDF)

UC San Diego, April, 2015
- Learn To See the Literature (PPT PDF)
- The Literature & Vulvar Disease Handbook (PDF)

ACOG, May 2016
- Vulvar Disease, What Do You Know? (PPT PDF)

ISSVA Postgraduate Course, July, 2015
- Your Diagnosis (PPT PDF)

ACOG District II Annual Meeting, NY, October, 2015
- Vulvar Disease (PPT PDF)
- Your Diagnosis (PPT PDF)

SGISI Argentina, NY, December, 2015
- Surgeries for Benign Conditions (PPT PDF)
- Procedures for Vulvar Disease (PPT PDF)
- Vulvar Disease (PPT PDF)
- Anatomy & Surgery (PDF)
- Clinical Aspects of Gynecology (PPT PDF)
Make Your Selection

A  B

C  D

[Image of a close-up view of an organ or tissue]
Your Diagnosis Is?

A. Vitiligo
B. Cellulitis
C. Lichen sclerosus
D. None of the above
A 19 year old woman presents with vulvar erosions (majority perianal and buttock) and ulcers increasing for weeks. The itchy lesions started around the vulva and anal area. She is now consumed with itching and discomfort and nothing works.
• Biopsy - lichen simplex chronicus and secondary impetiginized excoriations. Rebiopsy - ulceration with mixed inflammation.

• Symptoms are relieved with Sitz baths and a compounded cream - amitriptyline, baclofen, cyclobenzaprine, diclofenac, gabapentin, ketamine, and lidocaine.

• She is suicidal, depressed and co-dependent on her mother.
Your Diagnosis Is?

A. Contact Dermatitis  
B. Herpes Simplex in Immunosuppressed  
C. Crohn’s disease  
D. Behcet’s Disease

Severe Primary Irritant Contact Dermatitis

Due to topical compound - 7 tubes a day
The most common contact dermatitis is allergic contact dermatitis. Primary irritant contact dermatitis can complicate all vulvar conditions. Contact dermatitis can be acute or chronic. Over cleansing and use of “Wipes” are a common cause of contact dermatitis.

The following statement about contact dermatitis is incorrect:

A. The most common contact dermatitis is allergic contact dermatitis
B. Primary irritant contact dermatitis can complicate all vulvar conditions
C. Contact dermatitis can be acute or chronic
D. Over cleansing and use of “Wipes” are a common cause of contact dermatitis
A 49y.o. G4P2 presents for consultation of chronic vulvar pruritus and irritation. Her vaginal pH is 4.0.
Her most likely diagnosis is:

A. Trichomonas
B. Candida glabrata
C. Candida albicans
D. Bacterial vaginosis

Candida albicans KOH

Candida glabrata on Cornmeal-Tween 80 agar:
Small, compacted blastoconidia with no pseudohyphae formed
She is doing well for 12 months then returns with discomfort. A culture reveals Candida glabrata.

Candida glabrata responds best to:

A. Oral fluconazole
B. Boric acid per vagina
C. Intravaginal metronidazole
D. Terconazole (Terazole®)
Other Antifungals
Boric Acid

- Puratronic, 99.99995% (metals basic)
- Formula: $\text{H}_3\text{BO}_3$
- Formula Weight: 61.83
- Form: Crystalline Powder
- Melting Point: 170.9°C
- Merck Number: 11,1336
Candida Glabrata

- Low vaginal virulence
- Rarely causes symptoms, even when identified by culture
- Exclude other co-existent causes of symptoms and only then treat for C. glabrata

Does she qualify for the diagnosis of having recurrent Candida infections?

A. Yes
B. No
The definition of recurrent Candida infections requires a minimum of how many infections per year

A. 2
B. 3
C. 4
D. 5

ISSVD Candida iphone App

<table>
<thead>
<tr>
<th>Contributors</th>
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</thead>
<tbody>
<tr>
<td>Michael S. M. Lanham, MD</td>
</tr>
<tr>
<td>Hope K. Haefer, MD</td>
</tr>
<tr>
<td>Paul Nyirjesy, MD</td>
</tr>
<tr>
<td>Jack D. Sobel, MD</td>
</tr>
<tr>
<td>Lynette J. Margesson, MD</td>
</tr>
<tr>
<td>Libby Edwards, MD</td>
</tr>
<tr>
<td>Duane W. Newton, PhD</td>
</tr>
<tr>
<td>Colleen K. Stockdale, MD, MS</td>
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### Treatment by Type

#### Yeast Culture/Speciation Results

- *Candida albicans*
- *Candida glabrata*
- *Candida parapsilosis*
- *Candida tropicalis*
- *Candida lusitaniae*
- *Trichosporon*
- *Saccharomyces cerevisiae*
- *Candida kefyr*
- *Candida dubliniensis*

There are limited data on some of the treatment regimens. The compounded medications generally are suggestions to consider when other agents are not working. The compounded medications are generally used for resistant strains of *Candida*.
### Candida Iustariae

Topical creams can be irritating; vaginal tablets or suppositories may be less irritating. One-day products may be more irritating than longer-use products.

Ketoconazole is not included in this list due to the availability of more efficacious and less toxic medications.

Use as directed by package labeling. All pharmacies may not carry all products. The creams and suppositories are often oil-based and might weaken latex condoms and diaphragms.

#### Oral

**Fluconazole**

Additional information on drug interactions with fluconazole can be obtained in the CDC Guidelines [http://www.cdc.gov/std/stis2015/candiasis.htm](http://www.cdc.gov/std/stis2015/candiasis.htm)

In pregnancy, fluconazole is not to be used, instead use topical creams for treatment.

**Recurrence**

- 150 mg oral tablet every 3 days for three times, then 150 mg orally weekly for up to six months
- At times, other dosing may be required such as 100 mg oral tablet every 3 days for three times (day 1, 4, and 7), then 100 mg orally weekly for up to six months; or 200 mg oral tablet every 3 days for 3 times (day 1, 4, and 7) then 200 mg orally weekly for up to six months.
- If fluconazole cannot be used, (liver disease, Steven's-Johnson syndrome, or side effects such as headaches or nausea) consider:
  - Boric acid
  - Maintenance creams for recurrent yeast

**Itraconazole**

In pregnancy, itraconazole is not to be used, instead use topical creams for treatment.

100 mg oral tablet daily for 2 weeks, then twice weekly for up to 6 months.

#### Topical

**Clotrimazole**

- Clotrimazole 1% vaginal cream: 1 applicatorful per vagina nightly for 7 nights
- Clotrimazole 2% vaginal cream: 1 applicatorful per vagina nightly for 3 nights

**Miconazole 3 day cream**, suppository, ovule 4% (200 mg per dose) plus miconazole nitrate 2%
- One applicatorful, suppository or ovule per vagina nightly for 3 nights
- Miconazole nitrate 2% cream to the vulva twice a day for up to 14 days

**Miconazole 1 day insert (ovule) (1200 mg per dose)** plus miconazole nitrate cream 2%
- One insert (ovule) per vagina for one day or night
- Miconazole nitrate cream 2% cream to the vulva twice a day for up to 14 days

**Miconazole nitrate topical 2% cream** to the vulva twice a day for up to 14 days

For some recurrent infections, consider using Miconazole 2% vaginal cream: 1 applicatorful per vagina nightly for 14 nights, followed by 1 applicatorful twice weekly for up to six months.

#### Compounded

**Boric acid suppositories**

In pregnancy, boric acid is not to be used, instead use maintenance creams for recurrent yeast.

Vaginal boric acid suppositories 600 mg per vagina for 14 nights; if recurrent, consider suppression after re-treatment with twice weekly boric acid 600 mg per vagina.

Boric acid capsules can be FATAL if swallowed/taken orally.
CKS – case 1

- 43 year old P0 referred for persistent painful vulvar ulcer despite 10 day course antiviral (Acyclovir 800 mg TID)
- Culture 14 days prior was positive for HSV-II
- Denies fever, chills, systemic symptoms
- Gonorrhea, Chlamydia, HIV testing negative
- PMH / SH: polysubstance use, recent incarceration, prostitute
What do you do?

A. Consult infectious disease specialist
B. Initiate IV acyclovir
C. Biopsy lesions
D. Evaluate for co-infection

When you are in the Trenches….

- Infection
- Trauma
- Dermatosis
- Malignancy
- Combination
- Suspected unrecognized infection:
  - Also concern for failed treatment of HSV (compliance?)
    - Initiated Valacyclovir 1 gram BID x 10 days
    - CDC 2015

- Infection:
  - HSV culture – done previously and was positive
  - HIV – done previously and was negative
  - RPR – sent And was positive!
Primary Herpes Simplex Virus

- Occur in patients who have not previously been exposed to HSV
- Clinical manifestations typically occur after 3-7 days of incubation
- Initial symptoms: pruritus and burning; followed in 24 – 72 hours by vesicular eruption.
- Systemic symptoms: fever, headache, and malaise
- Urinary symptoms common – may need catheter

*Wilkinson Atlas of Vulvar Disease, 1995 figure 8.14*
Diagnosis by Herpes Culture

Scraping a crusted HSV lesion will result in a positive culture result more than 50% of the time:

A. True
B. False
HSV Culture by Stage of Lesion

Modified from Holmes KK, et al Sexually Transmitted Diseases. pg 942

What about the Syphilis?

- Given presence of ulcer x 2 wks unresponsive to acyclovir, presumed primary Syphilis (though treatment for early latent Syphilis is the same…)
  - RPR positive, confirmatory test with FTA-ABS positive
- Benzathine penicillin G 2.4 million units IM x 1 (CDC 2010)
- HIV was negative (test if not done previously)
- CSF evaluation if symptoms or signs suggesting neurologic disease
- Complete healing at follow-up
CKS

• 49 year old G3P3 referred for further evaluation and treatment given a 4 year history recurrent vulvar condyloma. Initially treated with TCA. Now with increasing lesions despite use of imiquimod. Desires “laser ablation”.

• What is your diagnosis?
What’s your Dx?
A. Warts
B. Not warts

How would you proceed?
A. Re-treat with TCA (provider applied)
B. Re-treat with imiquimod (pt applied)
C. Proceed with laser (patient preference)
D. Perform biopsy (diagnosis)
Biopsy indicated

- Always biopsy for failure to respond to treatment for condyloma!!
- Need to rule out dysplasia / cancer
- However, in this case does not look like cancer…
- Biopsy confirmed acrochordon (skin tags)
  - Benign growth
  - Associated with skin friction, obesity, diabetes

Treatment

- Symptomatic
- Concern for associated dysplasia

- Excise
- May consider: cryotherapy, cauterity, LASER, ligation
A 53-year-old registered nurse (RN) is referred for consultation for vulvar pain, irritation and non-healing lesions. She has seen her primary care (family practice), gynecologist, dermatologist, and most recently gyn oncologist (former resident – referred to me).

Started 2 years ago as single lesion. Spread (2 areas) 1 year ago – saw derm (biopsy = acute and chronic inflammation). Topicals = nothing. This year = 3 areas = gyn onc = me.

Had 50 year check-up including colonoscopy = all good (10 year clearance). Routine mammo/cytology = all good (current)

No meds

Newly married!

Husband ok (no penile problems!)

ROS = NEGATIVE
EXAM
No oral lesions

Part 1
Would you repeat the biopsy(s)?

A. Yes
B. No
Part 2
What is your initial diagnosis?

A. Basal cell cancer
B. Squamous cell cancer
C. Crohn's
D. Behcet's
E. Lichen Planus

PLAN
She had biopsies taken 1 year ago by derm; acute and chronic inflammation.
Given classical “knife cut” lesion at right periclitoral aspect recommended colonoscopy first, repeat biopsy second (she agreed …. Second opinion helped).
Though perplexed by negative ROS and colonoscopy less than 3 years prior!
Local GI repeated colonoscopy and upper endoscopy - identified Crohn's disease (terminal ileum).
A mimic....

- 67 year old female referred for recurrent yeast vulvovaginitis
- Incomplete response to topical and oral antifungals
- Pruritus affecting activities / “all consuming”

Red plaques with discrete boarders and satellite lesions
Phimosis of the clitoral hood and involution of the labia minor; thin, shiny vestibular tissue

Called for Dx opinion?
A. Wet prep
B. Culture
C. Biopsy
D. Further exam
Diffuse erythematous patches with scale on feet and lower extremities = diagnosis

What is your diagnosis?
A. Chronic yeast
B. Paget’s
C. Psoriasis
D. Contact dermatitis
Psoriasis

• Common hereditary, scaly rash
  – Vulvar = flexural psoriasis or psoriasis inverses
• Silvery white adherent scale on red plaques
  – In groin = well demarcated, moist, thin red patches
  – Often missed or hidden = look elsewhere for typical skin lesions

Psoriasis treatment

• Stop irritants
• Topical steroid ointment
• Topical tacrolimus 0.1% ointment or pimecrolimus 1% cream
  – Consider systemic medications if severe = consult dermatology
Summary

When patients do not respond to therapy
- Reconsider the diagnosis
- Check for infection - fungal, bacterial, HSV
- Consider contact dermatitis to a medication, over washing, etc.
- Consider tracts/fistulae

Your diagnosis is........
Case

- 58 year old woman presents with a 2 year history of dyspareunia, burning and rawness
- Gyn records report KOHs showing yeast
- Poor response to antifungals
- Estrogen replaced without improvement
Is this?
- contact dermatitis
- lichen planus
- Zoon’s vulvitis (plasma cell vulvitis)
- differentiated VIN

Is this?
- contact dermatitis
- lichen planus
- Zoon’s vulvitis (plasma cell vulvitis)
- differentiated VIN
Plasma cell vulvitis (Zoon’s vulvitis, vulvitis plasmacellularis)
Zoon’s - Dx

- Morphology of red/brown purpuric or deep red patches on mucous membranes (less often on modified mucous membranes)
- Confirmed by biopsy showing plasma cells, dermal hemosiderin, effacement of the epidermis, lozenge-shaped epithelial cells
Zoon’s – Rx

The literature reports good results (not I)

• **Ultrapotent topical corticosteroids (of course)**
• **Intralesional steroids**
• **Clobetasol, oxytetracycline, and nystatin compounded (personal communication Lynne Margesson)**
• **Fudisic acid (antibiotic cream)**
• **Topical retinoids (ouch!)**
• **Imiquimod (ouch!)**
• **Calcineurin inhibitors (often ouch!)**
• **CO2 laser (ouch!)**
CASE

• 68 year old woman presents with a history of lichen planus and a history of a vulvectomy 8 years ago for SCC
• She says that her lichen planus is becoming more poorly controlled despite daily clobetasol
• Irritation and itching is increasing, and testosterone produced intolerable burning
Is this?

- differentiated-VIN
- Lichen planus
- Zoon’s vulvitis (plasma cell vulvitis)
- Can’t tell
Is this?

- differentiated-VIN
- Lichen planus
- Zoon’s vulvitis (plasma cell vulvitis)
- CAN’T TELL

Biopsy shows differentiated VIN

- Can be associated with invasive carcinoma or become cancer
  - often invades and metastasizes quickly if it becomes a cancer
- Occurs in setting of LS or LP, not HPV
- Generally older women
Woman with LS, d-VIN (white morphology)

D-VIN in patient with LS
Lichen sclerosus and lichen planus confer increased risk for SCC

- Preceded by differentiated VIN
- Most often hyperkeratotic white
- Most often in older women
- Most often in long standing disease
- But can be red, thin
- Biopsy anything chronic you cannot explain

D-VIN associated with LS/LP

- Biopsy anything that you can’t explain in women with LS or LP
- Punch
- Histology –differentiated VIN (differentiated sounds good, but this is the histology associated with rapid invasion and metastasis)
CASE

- 32 year old woman who was well until 8 months ago
- Pain and tearing with sexual intercourse
- Heals in 3-4 days but always recurs
- Otherwise well, and no symptoms if not sexually active
Is this?(plasma cell vulvitis, vulvitis Lichen planus HSV Mechanical fissure Aphthous ulcer)
Is this?

- Lichen planus
- HSV
- Mechanical fissure
- Aphthous ulcer

MECHANICAL POSTERIOR FOURCHETTE FISSURE

- Unknown cause, though occasionally associated with skin disease or estrogen deficiency
- I insist on visualizing the ulcer myself; occasionally the patient reports sensation of an ulcer when it isn’t there and it can be vestibulodynia
MECHANICAL POSTERIOR FOURCHETTE FISSURE

- Modestly useful is
  - topical lidocaine
  - woman on top
  - copious lubrication
MECHANICAL POSTERIOR FOURCHETTE FISSURE

- Sometimes useful - have patient produce fissure, keep it open with dilators so the surface of the fissure re-epithelializes in the “open” position
- Most definitive therapy is surgical – perineoplasty. Excise front to back rather than side to side, and advance vaginal mucosa to cover defect

No, no, just tightens the introitus
MECHANICAL POSTERIOR FOSSURE

• Sometimes useful – have patient produce fissure, keep it open with dilators so the surface of the fissure re-epithelializes in the "open" position

• Most definitive therapy is surgical – perineoplasty. Excise front to back rather than side to side, and advance vaginal mucosa to cover defect

CASE

• 34 year old AA woman presents to your office with a 6 year history of recurrent boils of the vulva and medial thighs
• She brings cultures which have shown group B streptococcus, klebsiella, MRSA, and enterococcus at various times
CASE

• She reports that she improves briefly with each course of antibiotics, but experiences prompt relapse
• Her mother, who lives with her, has a similar condition
• She is frightened because an infectious disease doctor thinks she may have HIV causing her to have infections, but she refuses testing
Is this?

- MRSA furunculosis
- Hidradenitis suppurativa
- Evolving polymicrobial infections in patient with undiagnosed HIV
- Job’s syndrome
Is this?

- MRSA furunculosis
- Hidradenitis suppurativa
- Evolving polymicrobial infections in patient with undiagnosed HIV
- Job’s syndrome

HIDRADENITIS SUPPURATIVA (inverse acne)

- Occurs in one or more areas of apocrine glands (in the milk line)
- Multiple outlet follicles, resulting in keratin obstruction of follicles/comedones
- Distention of follicles producing cysts
- Eventual leakage of keratin debris and resulting foreign body inflammation
HIDRADENITIS SUPPURATIVA
differentiation from infection

- Chronic nature
- Presence of comedones
- Scarring, sinus tracts
- Location
- Poor response to antibiotics
- Negative or variable culture results
HIDRADENITIS SUPPURATIVA
differentiation from infection

- More common and more severe in individual of African genetic background
- Obese patients
- Smokers
- Men

HIDRADENITIS SUPPURATIVA
therapy

- Difficult in patients with severe disease
- Careful patient education regarding expectations
- Weight loss, including bariatric surgery
- Stop smoking
- Chronic anti-inflammatory antibiotics (doxycycline, minocycline, trimethoprim-sulfamethoxazole, clindamycin)
HIDRADENITIS SUPPURATIVA

therapy

• Intralesional triamcinolone 10 mg/cc, .1-.2 cc into early cyst (can teach patient to self administer)
• (perhaps hormonal therapy – OCP, spironolactone)
• Surgery – excision of small areas, or dramatic excision of large areas with grafting
• TNF alpha blockers - adalimumab (Humira ®) recently approved

HIDRADENITIS SUPPURATIVA

Management of HS is a real challenge

Short courses of antibiotics will get these patients out of your office, but will not improve the quality of their lives
Thank you!!