VULVAR DERMATOLOGY AND DISEASE

An introduction to office vulvology

Disclosures

- None financial
  - *It's hard to get rich doing vulvar disorders*
- I'm not a dermatologist!
  - *I just see a lot of this*
  - *So I read a lot about this*
  - *So I do a lot of this!*

Objectives

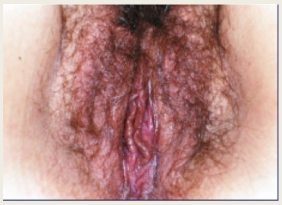
- Recognize and describe normal vulvar anatomy (including variants)
- Recognize and/or treat benign vulvar disease
- Recognize and work-up non-benign vulvar disease
- Be familiar and comfortable with workup and treatment of common complaints/findings
- Be comfortable with typical and atypical presentations of common office vulvar complaints

This presentation will…

- Serve as an introduction
- Be as high yield as I can make it!!
  - *LOTS OF PICTURES!*
- Not be inclusive (TOO MUCH OUT THERE!)
- Casual! (Speak up and ask questions, please)
- There may be some bad puns (sorry)

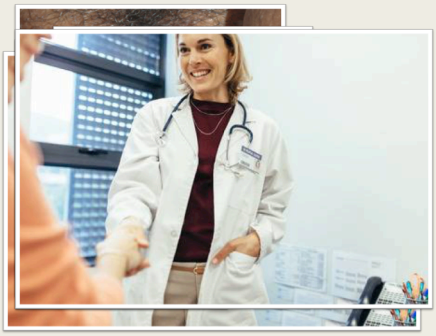
What is the vulva?

"n There?"
Th agina"



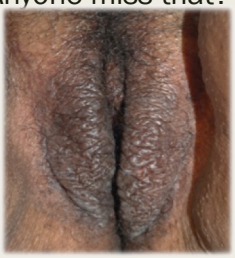
Typical Day

- 39yo F presents for annual exam. No significant PMHx. Last Pap 3 years ago, normal. Reports itching and intermittent vaginal discharge. Wants refill on OCPs.



Typical day?

Anyone miss that?



Key to recognizing abnormal, is to know and understand normal anatomy and variations!

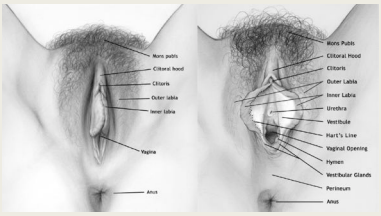
Vulvar Exam: Key points

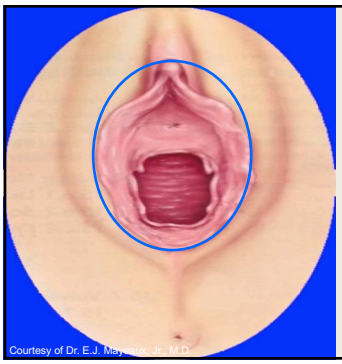
- Be methodical!
- Have the right tools available (and know how to use them)!
- Look *and* touch!
- Always have good exposure!

Be methodical

Five main parts of the vulva

- Clitoris + hood
- Labia Majora
- Labia Minora
- Vestibule
- Introitus





Vulvar Anatomy

Nonhair-bearing
Mucus membrane
similar to mouth

vs

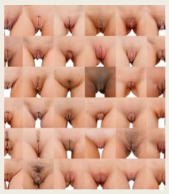
Hair-bearing
similar to rest of skin

Variations

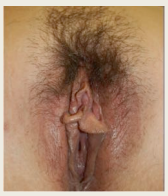
- Color/Pigmentation
- Size
- Symmetry
- Redness
- Hair
- Glands/structures (clitoris/Skene's)

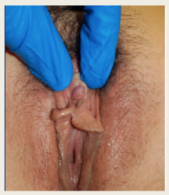
Modifying factors

- Age
- Race
- Ethnicity
- Hormonal Status
- Medications
- Pre-existing medical conditions



Clitoris + Hood

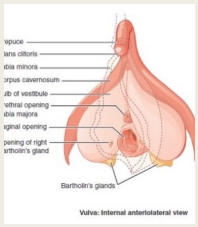




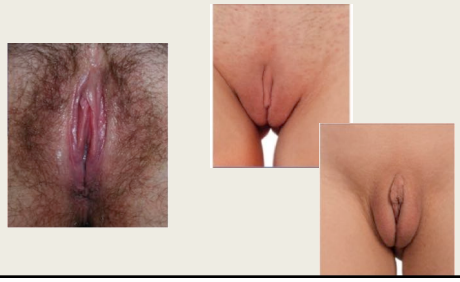
Exposure of the clitoris is an essential part of the pelvic exam!

Glans Clitoris

- Average size about 5mm
- Range from 2-10mm

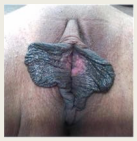


Labia majora

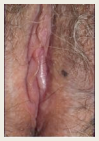


Labia minora

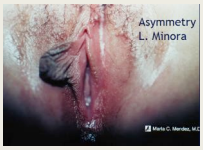
Large



Small



Asymmetry



Classification

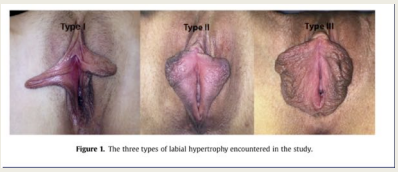
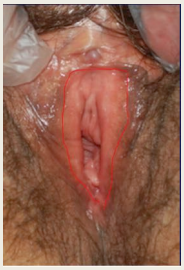


Figure 1. The three types of labial hypertrophy encountered in the study.

Smarrito, Stéphane. "Classification of Labia Minora Hypertrophy: A Retrospective Study of 100 Patient Cases." JPRAS Open, vol. 13, 17 June 2017, pp. 81–91., doi:10.1016/j.jpra.2017.05.013.

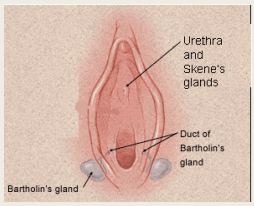
Vulvar vestibule



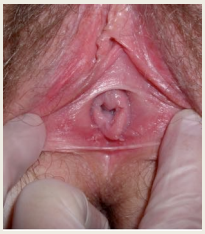
- From hymen to Hart's line, from clitoris to posterior fourchette
- Hart's line: Papillated-appearing keratinized epithelium meets non-keratinized squamous epithelium

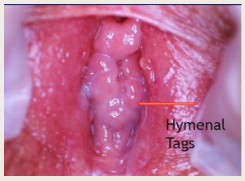
Vulvar vestibule

- Epithelium approx 1mm thick
- Contains important structures:
  - *Urethral orifice*
  - *Bartholin's duct openings*
  - *Minor vestibular glands*
  - *Skene's ducts*



Introitus

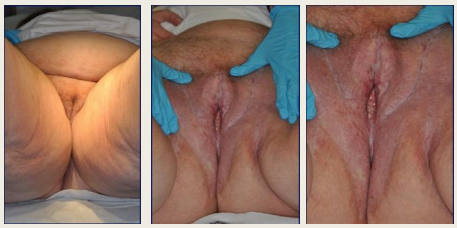




Tools

- Speculum
- Magnification
- Good light source
- Wet mount slides + KOH
- Biopsy supplies
- Culture swabs
- Helping hands!

Good exposure!!

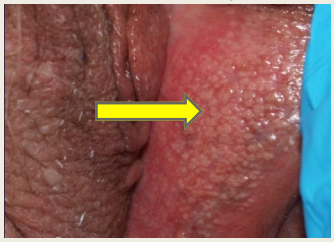


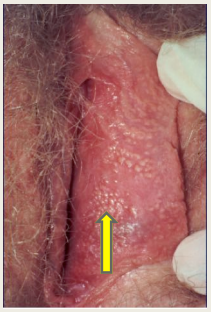
Disease vs Normal

- Guard against over-diagnosis
- Significant morbidity from overly aggressive treatment of low-grade disease and of equivocal changes
- Most common normal vulvar findings that have been misdiagnosed as disease are
  - *Micropapillations*
  - *vascular ectasia*
  - *sebaceous hyperplasia*

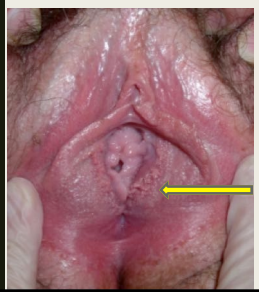
Fordyce Spots

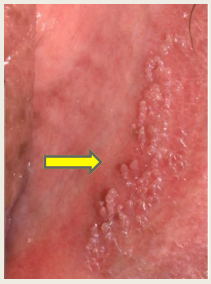
- *Enlarged sebaceous glands*
- *Usually cream-colored lobules*





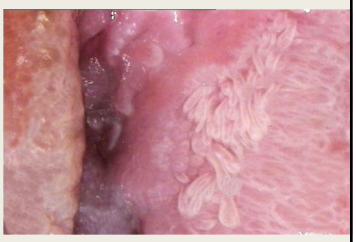
Vulvar Papillomatosis





Micropapillomatosis Labialis

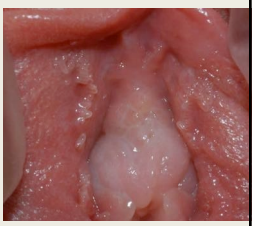
- Tiny papillary growths on the vestibule
- Usually symmetric
- May turn acetowhite
- Not HPV-related
- NORMAL variant!
- Reassurance only



Courtesy of Tom Cox, MD

Micropapillations

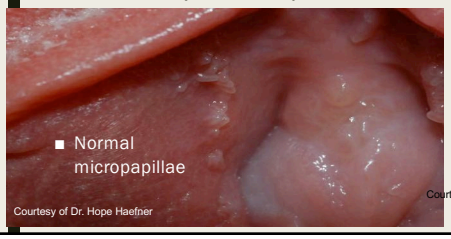
- Biopsies often reported as HPV
  - *HPV-DNA not routinely assoc.*
  - *If biopsy done, may be ideal to do in-situ hybridization as well as hematoxylin-eosin stains*
- Three patterns: micropapillae, vestibular papillomatosis, and papillary HPV disease



Courtesy of Dr. Hope Haefner

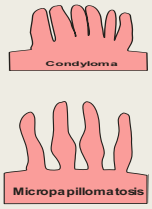
Micropapillations

- Normal micropapillae are congenital but may be accentuated by inflammatory conditions



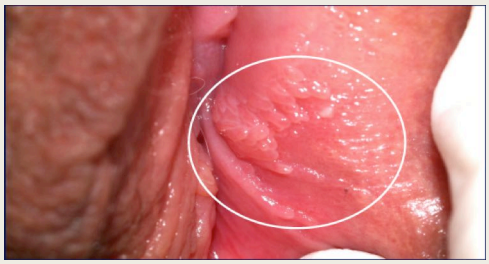
- Normal micropapillae

Courtesy of Dr. Hope Haefner



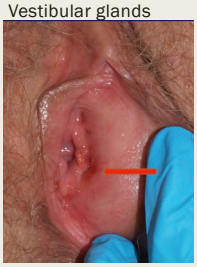
Courtesy of Dr. E.J. Mayeaux, Jr., M.D.

Vulvar Papillomatosis

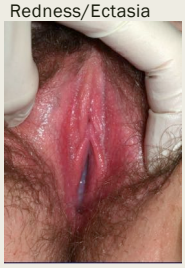


Common vulvar variations

Vestibular glands

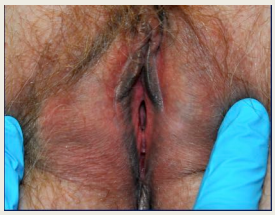


Redness/Ectasia



Common vulvar variations

Hyperpigmentation



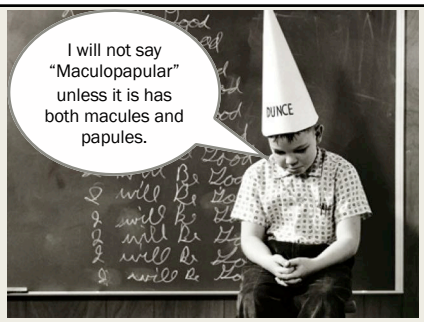
- Typically of labial minora and perianal skin
- Pregnancy, hormones and women with darker skin tones

Terminology: How to speak the language

- Primary morphology
- Secondary morphology
- Pigmentation (Coloration)
- Shapes
- Distribution

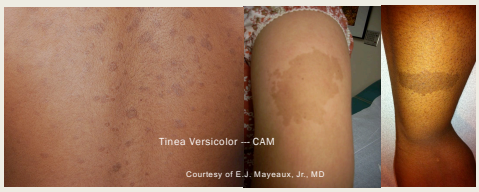
Primary Morphology

- Macule
- Patch
- Papule
- Plaque
- Wheal
- Nodule
- Tumor
- Vesicle
- Bulla
- Pustule



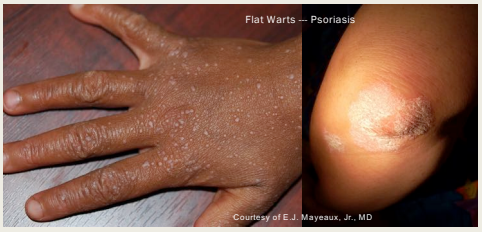
Non-Palpable

Macule < 5mm Patch >5 mm



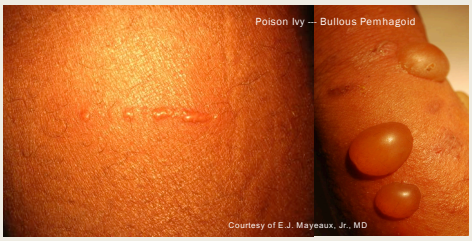
Palpable

Papules < 5mm Plaque >5 mm



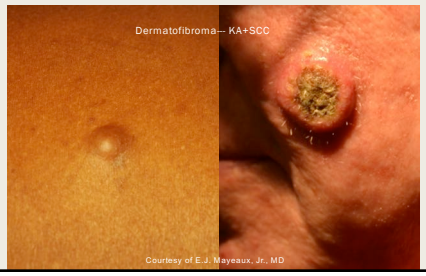
Fluid Filled

Vesicles <5 mm Bulla >5 mm

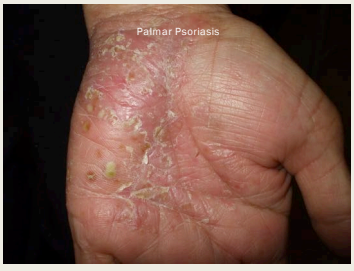


Nodule Tumor

(between 1 and 2 cm) > 2 cm



Pustules (Pus filled)

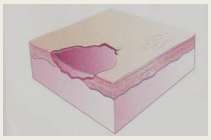


Secondary Morphology

- Scale (desquamation)
- Crusts (dried exudate)
- Excoriation (scratching, picking)
- Lichenification (thickening)
- Erosions, ulcers, fissures
- Atrophy

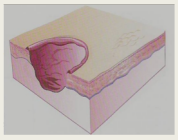
What has happened to the lesions over time?

Erosion



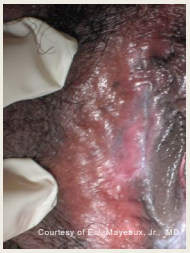
- Superficial or deep epidermis
- Not past basal layer

Ulcer



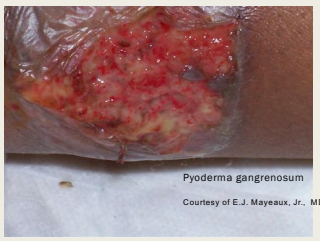
- Always secondary
- Full thickness extending into dermis or deeper

Erosions



Erosive lichen planus

Ulcer



Basic principles of diagnosis

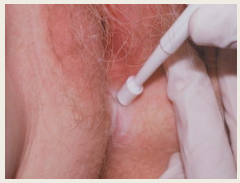
- Differentiate "itch" vs "hurt"
- Wet mount for EVERY chronic symptom
- Biopsy and culture liberally and as needed
- Ask the patient questions!
- ASK THE PATIENT QUESTIONS!
- ASK THE PATIENT QUESTIONS!!

Systematic Approach to Common Vulvar Disorders

Ulcers	Behcet's syndrome, AIDS, HSV, Syphilis, Hidradenitis
Papules/Masses	Papillomatosis, Molluscum, Condyloma, Sebaceous Hyperplasia, Nevi, Achrochordons, Angiokeratomas
Cysts	Bartholin, Mucous, Skene
Neoplastic Lesions	VIN, Paget's, SCC, Melanoma
Skin conditions	Psoriasis, Lichen Planus
Dermatoses	Contact, Metals, others

Basics of biopsy

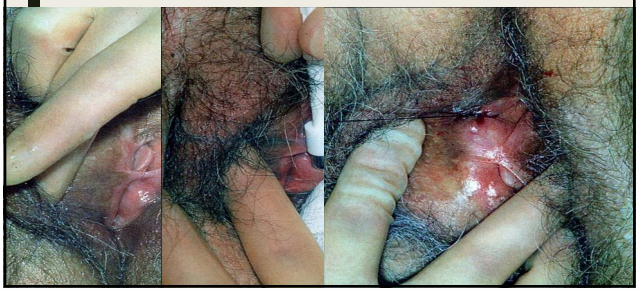
- Biopsy is NOT OBJECTIVE
- *TELL* the pathologist what you *want* to know
- **A negative biopsy doesn't rule out disease**
- Repeat biopsies may be useful
- Avoid midline/skin folds
- Don't squash/crush specimen!
- Off steroids for 3-4 weeks ideal



Punch Biopsy

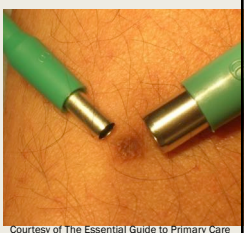
- Anesthesia
  - *1% lidocaine (sodium bicarb)*
  - *27-30 gauge needle to inject 1-3 cc's of anesthetic agent*
  - *Inject subepidermally*
- 3-5 mm Keyes punch
- Fine suture (3.0 or 4.0)
  - *Hemostasis & ↓ pain*
  - *Monsel's/Silver nitrate slows healing*

Vulvar Punch Biopsy



Punch Biopsy Technique

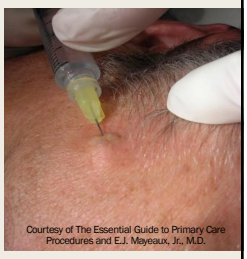
- Select a punch of sufficient size to obtain adequate tissue while minimizing scar size
  - *3 mm punch for most*
  - *4 mm minimum if histology and immunostaining*
- A punch that is slightly larger than the lesion can remove the entire lesion



Courtesy of The Essential Guide to Primary Care Procedures and E.J. Mayeaux, Jr., M.D.

Punch Biopsy Technique

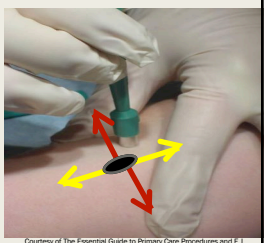
- Perform an intradermal injection for anesthesia
- Prep the skin with isopropol alcohol, povidone-iodine or chlorhexidine solution
  - *Alcohol prep pad is usually sufficient*



Courtesy of The Essential Guide to Primary Care Procedures and E.J. Mayeaux, Jr., M.D.

Punch Biopsy Technique

- Make the defect oval or elliptical by stretching the skin perpendicular to the lines of least skin tension with the nondominant hand
- After the biopsy, relax the nondominant hand, and the circular defect becomes more oval



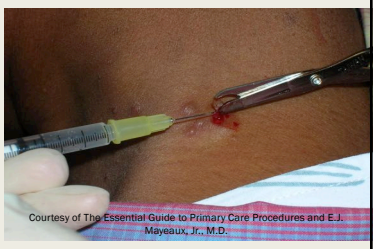
Courtesy of The Essential Guide to Primary Care Procedures and E.J. Mayeaux, Jr., M.D.

Punch Biopsy Technique

- Rotate the punch with mild downward force
- Turn the blade back-and-forth around its center axis
- Stop as soon as skin is penetrated and feel a "give''
  - *Don't go to the hub except where the skin is thick with no underlying structures*

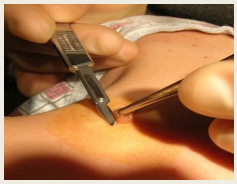
Punch Biopsy Technique

- Lift the specimen with forceps or the anesthesia needle
- Cut it free at the base (beneath dermis) if necessary



Punch vs Shave

- Punch
  - *Firm areas*
  - *Thickened skin*
  - *Indurated*
- Shave
  - *Blisters/erosions*
  - *Epidermal processes*



Vulvar therapy/care

- Vulva reacts more intensely to irritants
- Cleansing
  - *Plain tepid water (never hot) with fingertips!*
  - *Pat dry, never hair dryer*
  - *Hypoallergenic soaps if must*

Steroid Pointers

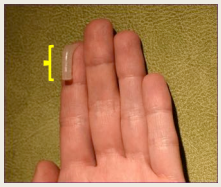
- *Start strong, then work down*
- *Limit amount (15grams without refills)*
- *Vulvar trigone = steroid resistant*
- *Labiocrural fold/perianal area – steroid sensistive*
- *Very inflamed tissue – try systemic first!*

MDedge www.mdedge.com

Class	Generic Name	Formulation
Class 1 Very High Potency		
	Betamethasone dipropionate	0.05% O C (Diprolene)
	Clobetasol	0.05% C F O L O
	Diflorasone diacetate	0.05% O
	Halobetasol propionate	0.05% C O
Class 2 High Potency		
	Amcinonide	0.1% O
	Betamethasone dipropionate	0.05% C (Diprolene)
	Desoximetasone	0.05% G, 0.25% C O
	Fluocinonide	0.05% C G O S
	Halcinonide	0.1% C
	Mometasone furoate	0.1% O
Class 3 High Potency		
	Amcinonide	0.1% C L
	Betamethasone dipropionate	0.05% C (non-Diprolene)
	Betamethasone valerate	0.1% O
	Desoximetasone	0.05% C
	Diflorasone diacetate	0.05% C
	Fluticasone propionate	0.005% O
	Halcinonide	0.1% O S
	Triamcinolone	0.1% O
Class 4 Mid Potency		
	Betamethasone valerate	0.12% F
	Fluocinolone acetonide	0.025% O
	Fluorandrenolide	0.05% O
	Hydrocortisone valerate	0.2% O
	Mometasone furoate	0.1% C
	Triamcinolone	0.1% C
Class 5 Mid Potency		
	Betamethasone dipropionate	0.05% L
	Betamethasone valerate	0.1% C
	Fluocinolone acetonide	0.025% C
	Fluticasone propionate	0.05% C
	Fluorandrenolide	0.05% C
	Hydrocortisone butyrate	0.1% C
	Hydrocortisone valerate	0.2% C
Class 6 Low Potency		
	Alcometasone dipropionate	0.05% C O
	Betamethasone valerate	0.1% L
	Desonide	0.05% C L O
	Fluocinolone acetonide	0.01% C S
Class 7 Low Potency		
	Hydrocortisone acetate	0.5% C L O, 1% C O F
	Hydrocortisone hydrocholide	0.25% C L, 0.5% C L O S, 1% C L O S, 2% L, 2.5% C L O S

C = Cream, F = Foam, G = Gel, L = Lotion, O = Ointment, S = Solution

Application Quantity Measurement



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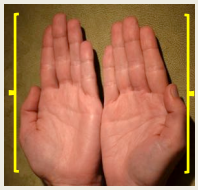
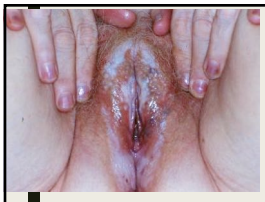


FTU = amount of ointment from a 5-mm diameter nozzle tube measured from the distal skin crease to the tip of the palmar surface of an adult's index finger (~0.5 g)

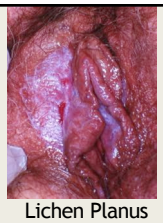
1 FTU = adequate amount of ointment for "thin and even" application to an area of skin equal to 2 adult hands (fingers together)

Modified from Eichenfield LF, et al. Translating Atopic Dermatitis Management Guidelines Into Practice for Primary Care Providers. Pediatrics 2015;136;554.

Things that go ITCH in the night



Lichen Sclerosus



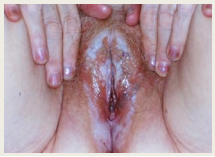
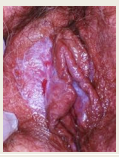
Lichen Planus

Lichen Simplex Chronicus

All Itchy!

The Lichens

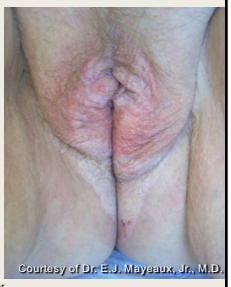
The Lichens


LS	LP	LSC
Itch or burn	Itch or burn	++++ Itch
Scars	Scars	No Scar
Not in vagina	In vagina and mouth	Not in vagina

Lichen Sclerosus

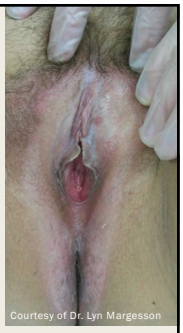
- Prevalence
  - *~1:300 to 1:1000 in consulting clinics*
  - *1.7% among gynecologist*
  - *Almost 3% in nursing homes*
  - *15% have extragenital disease*
  - *3-5% develop SCC*
- Bimodal age distribution: 5th-6th decades and prepubertal girls
- Probably primarily autoimmune
- Associated with thyroid disease, estrogen deficiency, vitiligo, LP and psoriasis



Stockdale CK, Boardman L. Diagnosis and Treatment of Vulvar Dermatoses. Obstet Gynecol. 2018 Feb;131(2):371-386.

Lichen Sclerosus - Symptoms

- Itch – 90% - severe – 30-50%
  - *10% no symptoms!*
- Pain, burning, sore – 40%
- Dyspareunia, sexual dysfunction
- Painful defecation, especially children
- With *asymptomatic vulvar scarring* – look for LS



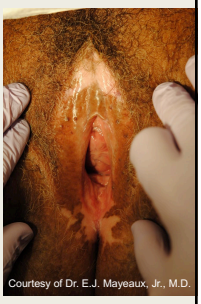
Lichen Sclerosus - Clinical Changes - Primary

- Classic white or waxy papules and plaques
- Cellophane-like surface sheen, crinkled, atrophic
  - *Skin becomes thin and inelastic*
- Figure of eight / hourglass pattern
  - *Usually starts at clitoral hood and/or perineal body*
- Patterns variable (perianal in 30% women)
- Texture change – touch it!!
- NOT in the vagina (unless on a prolapse)
- Rare in the mouth

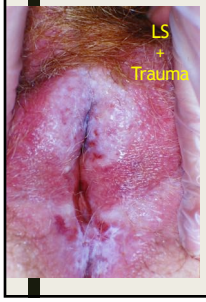
Lichen Sclerosus Diagnosis

- Biopsy is recommended (except in children)
- Serology is not useful
- A brief evaluation including thyroid function tests and examination for vitiligo and alopecia should be considered

Stockdale CK, Boardman L. Diagnosis and Treatment of Vulvar Dermatoses. Obstet Gynecol. 2018 Feb;131(2):371-386.



Courtesy of Dr. E.J. Mayeaux, Jr., M.D.



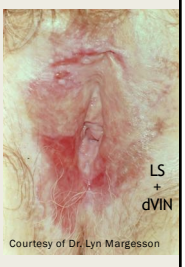
Typically LS <u>not</u>

erosive or ulcerated

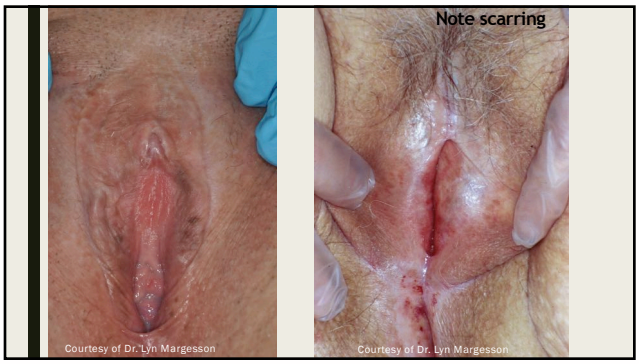
unless

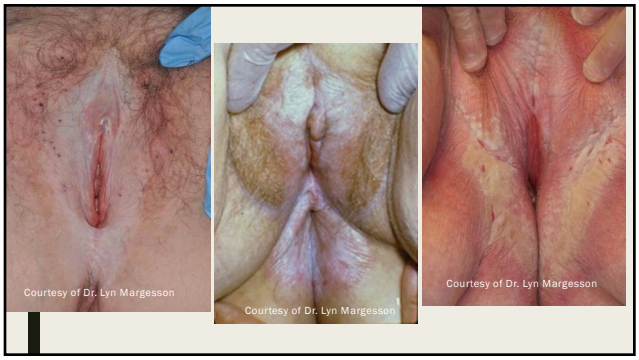
<u>irritated</u> / <u>scratched</u>,

<u>infected</u> or **carcinoma**



Courtesy of Dr. Lyn Margesson


Note scarring
Courtesy of Dr. Lyn Margesson
Courtesy of Dr. Lyn Margesson


Courtesy of Dr. Lyn Margesson
Courtesy of Dr. Lyn Margesson
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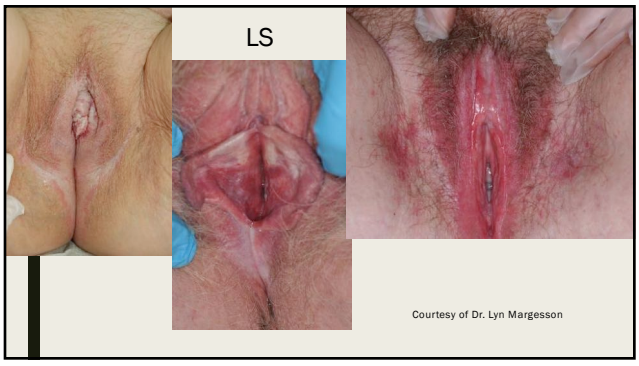
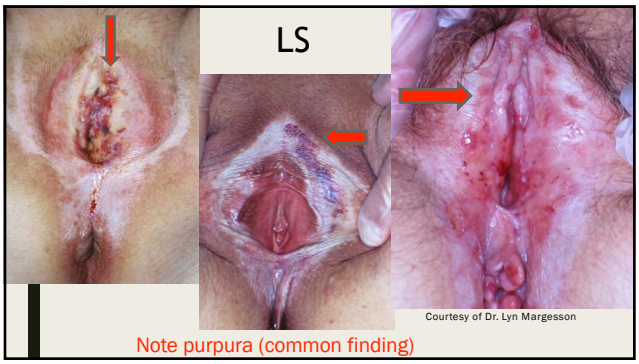

LS
Courtesy of Dr. Lyn Margesson

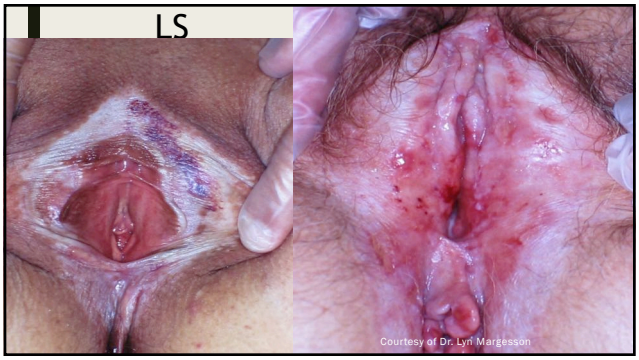
LS



Courtesy of Dr. Lyn Margesson

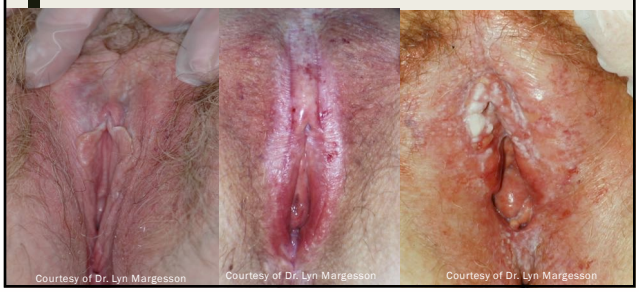
Note purpura (common finding)

LS



Courtesy of Dr. Lyn Margesson

Clitoral Changes



Courtesy of Dr. Lyn Margesson

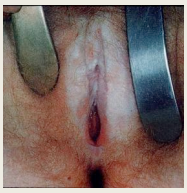
Courtesy of Dr. Lyn Margesson

Courtesy of Dr. Lyn Margesson

TREATMENT

- Treated with topical fluorinated steroids (clobetasol 0.05%)
- Treat only areas involved, and taper as disease improves
  - *Start BID → Normal skin*
  - *Reduce to 2-3x/week*
  - *Or less potent steroid*

May take months!!



Lichen Sclerosus Treatment

- Use topical estrogen if possible for postmenopausal women
- Lifelong treatment
- Treatment with corticosteroids decreases risk of scarring and cancer

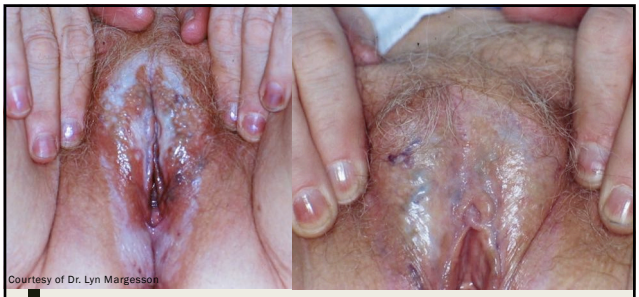
Stop the itching! Scratching proliferates the disease

JAMA Dermatol. 2015 Oct;151(10):1061-7

Lichen Sclerosus - Alternate Treatments

- Calcineurin inhibitors: burn, less effective
- Intralesional triamcinolone 3.3 - 10 mg/ml
- Systemic corticosteroids – prednisone, IM triamcinolone
- Methotrexate 10 -15 mg/ week po or sc + folate 1 mg/d
- Other - acetretin, cyclosporine, uv light, photodynamic therapy, Fraxel Laser, Platelet Rich Plasma

Evidence-based (S3) Guideline on (anogenital) Lichen sclerosus.
Kirtschig G, Becker J Eur Acad Dermatol Venereol. 2015 Oct;29(10):e1-43.

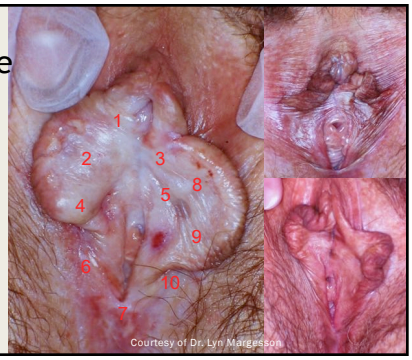


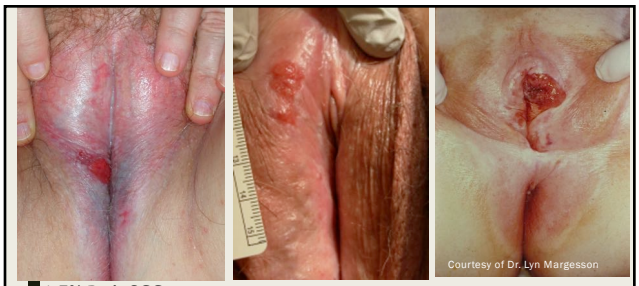
Lichen Sclerosus Before Tx

Post 12 wks of clobetasol

Intralesional Triamcinolone

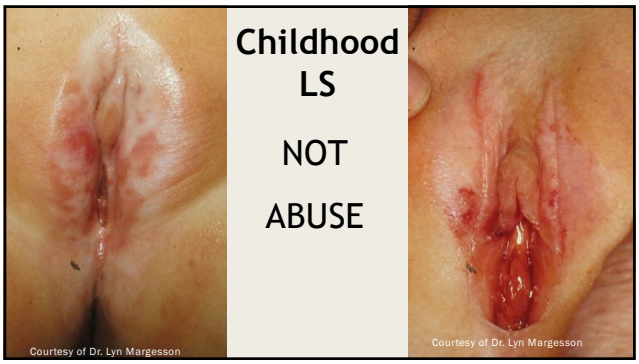
Sites of Injections of T/C 2.5-10mg/ml 25 gauge needle

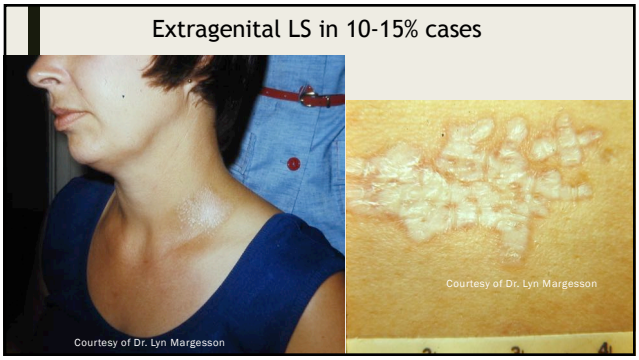


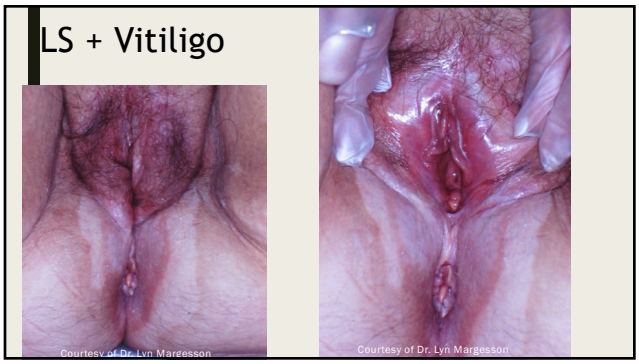


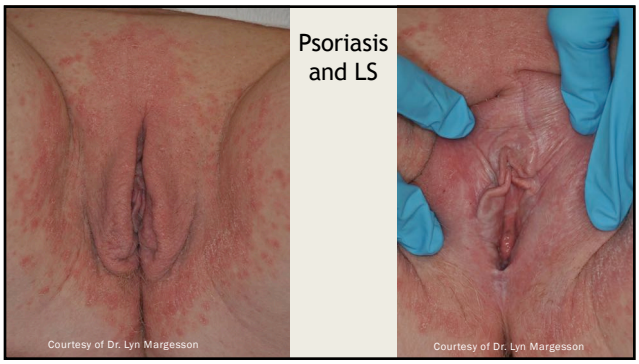
4-5% Risk SCC
60% Vulvar SCC have LS

Squamous Cell Carcinoma (in LS)


Childhood LS
NOT
ABUSE
Courtesy of Dr. Lyn Margesson
Courtesy of Dr. Lyn Margesson


Extragenital LS in 10-15% cases
Courtesy of Dr. Lyn Margesson
Courtesy of Dr. Lyn Margesson


LS + Vitiligo
Courtesy of Dr. Lyn Margesson
Courtesy of Dr. Lyn Margesson



Lichen Planus

(I'm not going to spend much time here)

Lichen Planus

- Onset is usually 30-60 years.
  - *1% of population*
  - *If buccal lesions present, 25% have vulvovaginal disease*
- Related to cell -mediated immunity
- Complete control is not the norm
  - *Frustrating, chronic and recurring disease*
- Punch biopsy for diagnosis
  - *Order histopathology and direct immunofluorescence to differentiate from other bullous disease*

Andreassi L, Bilenchi R. Non-infectious inflammatory genital lesions. Clin Dermatol. 2014 Mar-Apr;32(2):307-14.

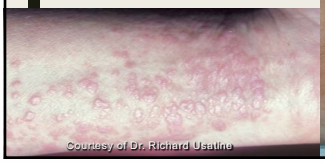
Lichen Planus

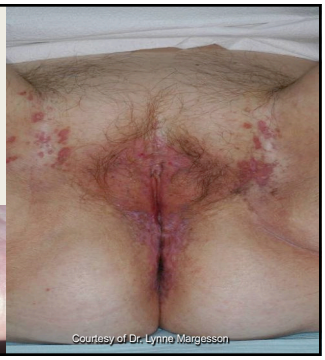
- Probably an autoimmune disorder with a T-cell-mediated pathogenesis
- Mucosal lichen planus most often affects the mouth, vulva, vagina, and rarely the conjunctiva, upper esophagus, and anus
- Mucous membrane lichen planus classically presents with white, reticulate, lacy or fern-like striae (Wickham's striae) adjacent to erythematous epithelium.
- Lichen planus can be difficult to distinguish from lichen sclerosus when presenting with a uniform white appearance

Stockdale CK, Boardman L. Diagnosis and Treatment of Vulvar Dermatoses. Obstet Gynecol. 2018 Feb;131(2):371-386.

Lichen Planus

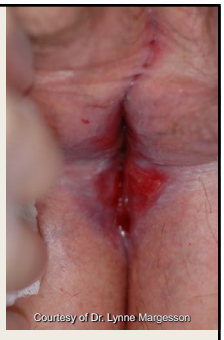
- Polygonal pruritic purple papules on skin





Erosive Vulvovaginal LP

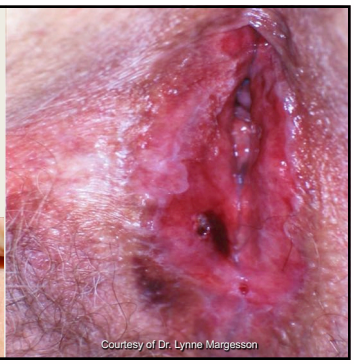
- Deep red erosions, glazed erythema with thin gray edge
- Fern-like or lacy white pattern
- Variable scarring / loss of architecture
- Pain plus burning



Lichen Planus

- White pattern on mucus membranes


Courtesy of Dr. Hope Haefner


Courtesy of Dr. Lynne Margesson

LP Treatment is Challenging

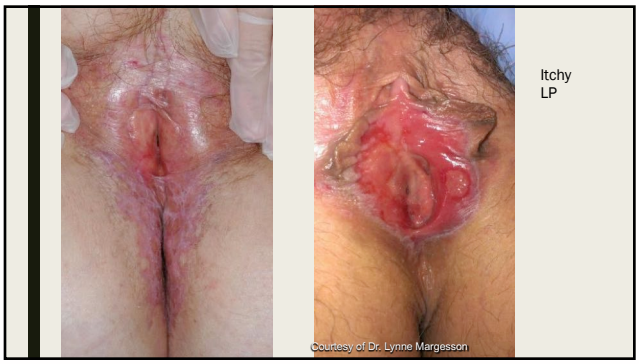
- No single agent universally effective & prognosis poor.
- Topical application of ultrapotent topical steroid ointment (clobetasol 0.05%).
  - *Evidence based on small studies of oral rather than genital disease.*
- Methotrexate, cyclosporine, oral steroids should be used only if local therapy fails.
- Surgery for vaginal synechiae and introital stenosis.

ACOG Practice Bulletin, No. 93. Obstet Gynecol 2008:111:1243.

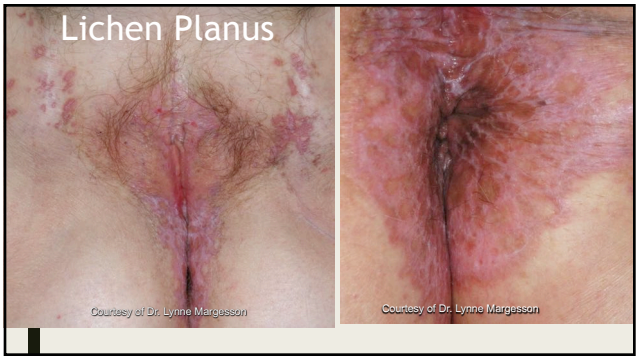
Lichen Planus

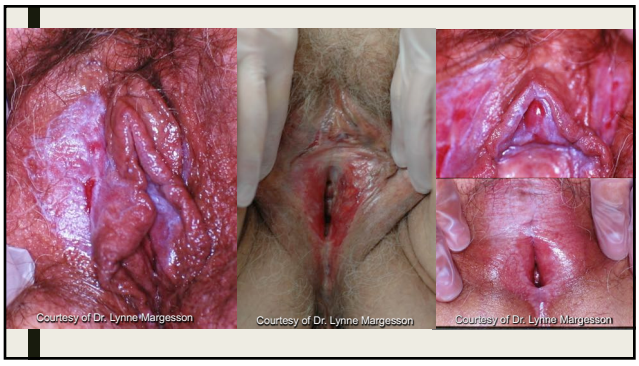
- Affects - usually postmenopausal women 50 – 60 yrs
- Sites - Skin, scalp, nails
- Mucous membranes - oral, genital, anus, esophageal, urinary tract
- Responds to immunosuppressive therapy
- 2-5% → SCC

Always Examine the Vulva & Vagina & Mouth


Courtesy of Dr. Lynne Margesson

Itchy
LP


Lichen Planus
Courtesy of Dr. Lynne Margesson
Courtesy of Dr. Lynne Margesson


Courtesy of Dr. Lynne Margesson
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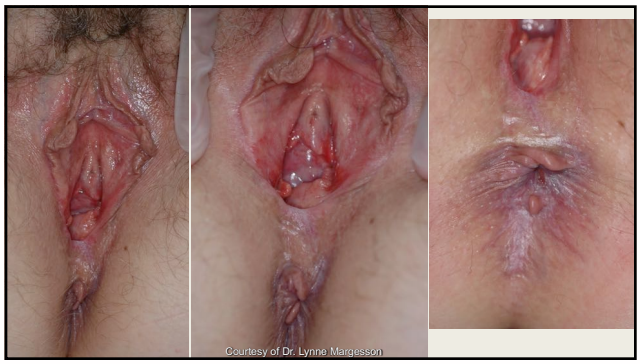
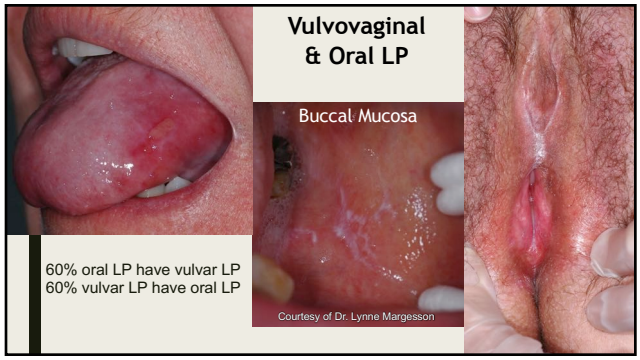
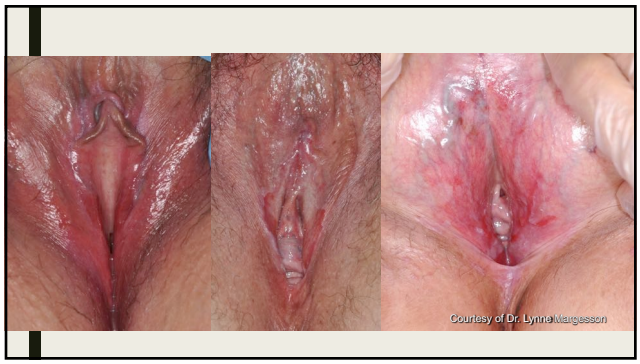
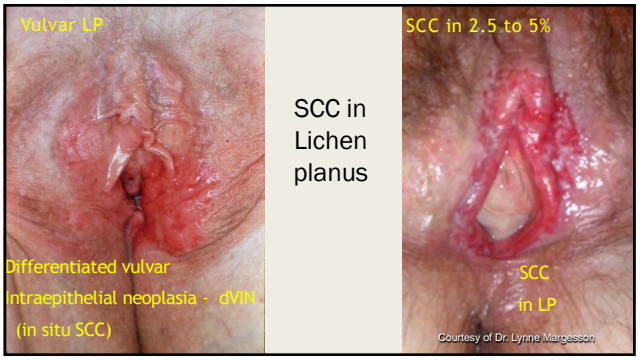
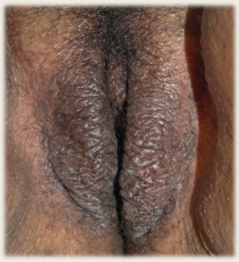

Courtesy of Dr. Lynne Margesson


Vulvovaginal
& Oral LP
Buccal Mucosa
60% oral LP have vulvar LP
60% vulvar LP have oral LP
Courtesy of Dr. Lynne Margesson


Courtesy of Dr. Lynne Margesson

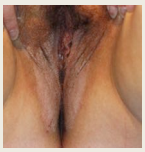


Lichen Simplex Chronicus (LSC)

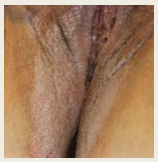


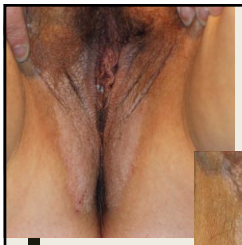
Lichen Simplex Chronicus (LSC)

End stage of scratching cycle



Itch ⟶ Scratch ⟶ Itch

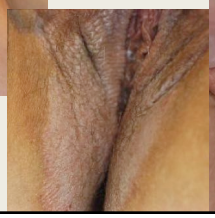


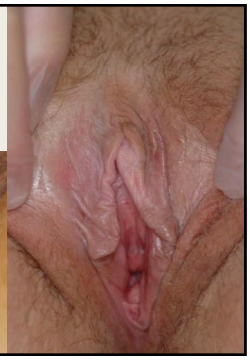


Lichen

Simplex

Chronicus

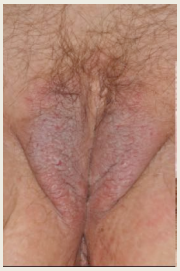




The itchiest lichen

Lichen Simplex Chronicus

- Scratching feels good!
- NOT a primary condition!
- Worse with heat, humidity, stress and irritants
- Need to break the itch/scratch cycle
- May be unilateral!



Lichen Simplex Chronicus

- Occurs in response to multiple inciting factors
  - *Genetics – atopic dermatitis*
  - *Environmental contact irritants (eg, irritation from clothing or chemicals in topical products, heat, perspiration)*
  - *Infections (yeast, dermatophytes, bacterial)*
  - *Chronic dermatologic conditions (psoriasis, lichen planus, lichen sclerosus)*
  - *Neurologic disorders*
  - *Psychiatric disorders*
- From repetitive scratching/rubbing and self-excoriation

Stockdale CK, Boardman L. Diagnosis and Treatment of Vulvar Dermatoses. Obstet Gynecol. 2018 Feb;131(2):371-386.

Lichen Simplex Chronicus

- **Nonscarring**, chronic inflammatory disease of the skin
- In vulvar specialty clinics accounts for 10–35% of patients- suggesting a prevalence of ~ 0.5% in the U.S.
- May present at any age
- 65% - 75% of patients have a history of allergic conditions (hay fever, asthma, childhood dermatitis)
  - *Often considered to be a localized atopic dermatitis*
- Sleep disturbance from the unrelenting pruritus

Stockdale CK, Boardman L. Diagnosis and Treatment of Vulvar Dermatoses. Obstet Gynecol. 2018 Feb;131(2):371-386.

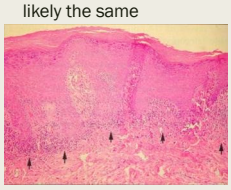
Lichen Simplex Chronicus

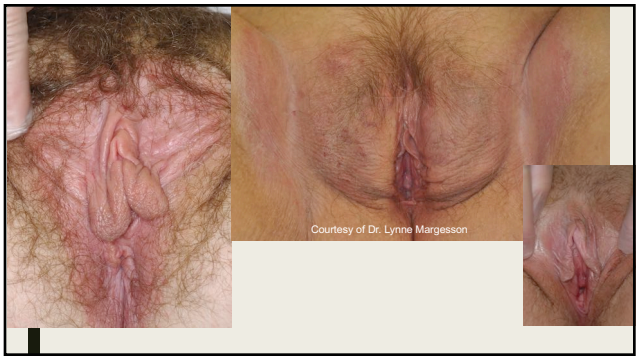
- Appears as erythematous, lichenified plaques +/- scaling or excoriation
- Skin changes
  - *Areas that are thickened and leathery*
  - *Hperpigmented or hypopigmented*
  - *Chronic scratching can lead to erosions and ulcers*
- Vaginal fungal cultures should be considered
- Biopsy is not necessary (but often done) unless there is concern for an underlying disease process or failure to respond to treatment

Stockdale CK, Boardman L. Diagnosis and Treatment of Vulvar Dermatoses. Obstet Gynecol. 2018 Feb;131(2):371-386.

Lichen Simplex Chronicus

- Lichen simplex chronicus and squamous hyperplasia are likely the same





Look for more than one problem

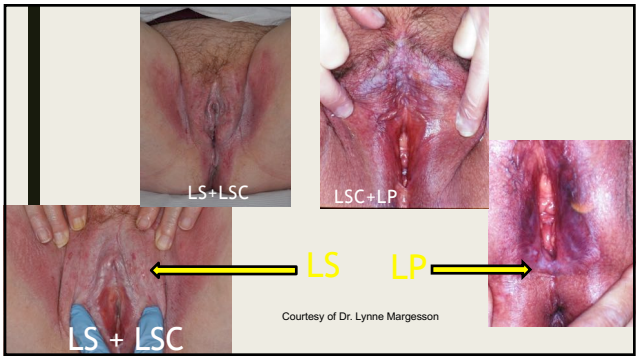
Contact

+/-

Infection

+/-

Dermatosis



Lichen Simplex Chronicus Treatment

- Multitargeted approach for optimal control of symptoms
  - *Removal of initiating factor(s)*
  - *Repair of the skin's barrier function*
  - *Reduction of inflammation*
- Disruption of the itch–scratch cycle
- Attention to vulvar hygiene and avoidance of irritants as well as barrier protection (eg, petrolatum, zinc oxide ointment)

Stockdale CK, Boardman L. Diagnosis and Treatment of Vulvar Dermatoses. Obstet Gynecol. 2018 Feb;131(2):371-386.

Lichen Simplex Chronicus: Treatment

1) Optimize Epithelial Barrier function

- Control infection – candida and bacteria (Staph, Strep)
- Reducing heat, sweat, irritation (oral oxybutynin ½ of 5 mg tab am and increase 2.5 mg up to 5 mg tid if needed)
- Stop irritants - Stop excessive hygiene, menstrual cups
- Immediate therapy: Soak and seal
  - *Sitz baths - lukewarm water or normal saline (- 1 tbs salt / 3 cups water)*
  - *Use cool packs or compresses to deaden nerves*
  - *No hot water - No ice packs*
  - *Use ointments - ZnO_2 - Remove with plain mineral oil on soft tissue*

Stockdale CK, Boardman L. Diagnosis and Treatment of Vulvar Dermatoses. Obstet Gynecol. 2018 Feb;131(2):371-386.

Lichen Simplex Chronicus: Treatment

2) Reduce Inflammation

- Moderate to high potency corticosteroid ointments
- Superpotent steroid taper -Clobetasol 0.05% ointment bid x 2 wks, daily x2 wks, MWF x 2 wks
- Systemic
  - *Prednisone 40 mg qAM X 5 to 7 days then 20 mg qAM X 5 - 10 days then topical*
  - *IM Triamcinolone (Kenalog-40): 1mg/kg up to 80 mg/dose, repeat in 1- 2 months if necessary*

Stockdale CK, Boardman L. Diagnosis and Treatment of Vulvar Dermatoses. Obstet Gynecol. 2018 Feb;131(2):371-386.

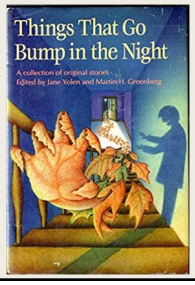
Lichen Simplex Chronicus: Treatment

3) Disruption of the itch–scratch cycle

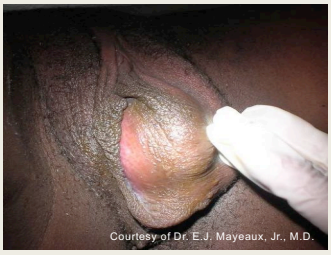
- Night: antihistamine (10-25 mg hydroxyzine), 25 mg amitriptyline or doxepin 10-100 mg 2-3 hours pre-bedtime, and gabapentin
  - *Non-sedating antihistamines work poorly*
  - *No topical diphenhydramine – Sensitizer*
- Day: fluoxetine, paroxetine, sertraline, citalopram (Celexa) 20 to 40 mg q AM - scratching can be a form of OCD
- Recognize and manage psychological factors
- Follow! Patients relapse
- Stop the scratching – gloves, oven mitts, PJs

Stockdale CK, Boardman L. Diagnosis and Treatment of Vulvar Dermatoses. Obstet Gynecol. 2018 Feb;131(2):371-386.

Things that go BUMP in the night



Bartholin's Gland Cyst / Abscess



Bartholin's Gland

- Located at base of labia minora
- Provide vaginal lubrication
- Ductal blockage results in enlargement
- Occurs in 2% of women
- Usually able to be treated in the office.

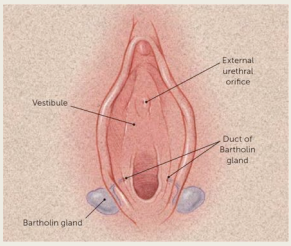
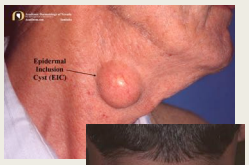
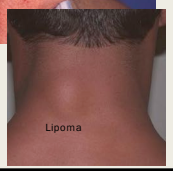


Illustration by Marcia Hartsock
Omole F, Simmons BJ, Hacker Y. Management of Bartholin's duct cyst and gland abscess. Am Fam Physician. 2003;68(1):135.

Bartholin's Gland Cyst/Abscess

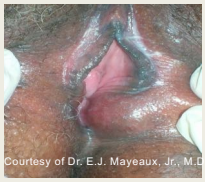
- More likely to occur in sexually active women
  - *Friction during intercourse*
- Abscesses usually *E. Coli* and *Staph aureus*
  - *STDs have a role*
  - *Trich likes to live here!*
- Other lesions can mimic these



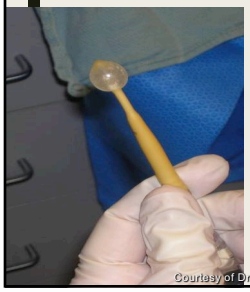


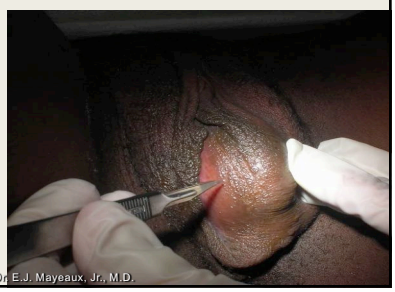
Treatment

- Don't lance/drain!
  - *They just come back*
- Need to fistulize/marsupialize!
- Treat only if large, infected or patient symptomatic
- Biopsy?
  - *Bartholin's cancer is rare (5% of vulvar cancers)*
  - *Higher >40, so biopsy if gland enlarged or recurrent obstruction*
  - *HPV 16 likes to live here*



Word Catheter





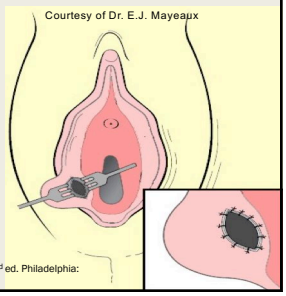
Word Catheter

- Inserted into the cyst or abscess following a stab incision
- Leave in place for 2-4 weeks
- Coverage for anaerobes & gonorrhea

Mayeaux EJ Jr. The Essential Guide to Primary Care Procedures 2nd edition. Philadelphia: Wolters Kluwer: Lippincott, Williams, & Wilkins. 2015.

Marsupialization

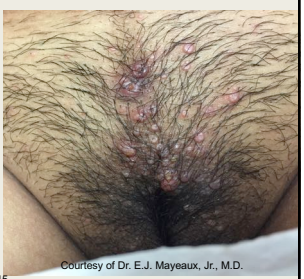
- A fusiform (elliptical) excision is performed to unroof the cyst
- Elevate the cyst wall and suture to the external skin



Mayeaux EJ Jr. The Essential Guide to Primary Care Procedures 2nd ed. Philadelphia: Wolters Kluwer: Lippincott, Williams, & Wilkins. 2015.

Molluscum Contagiosum

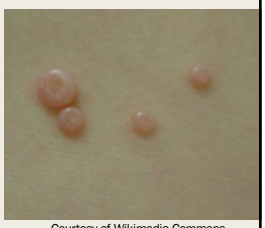
- DNA poxvirus
- Sexually transmitted
- Lesions on perineum and inner thighs
- Eosinophilic inclusions = molluscum bodies
- No treatment is necessary
- Resolution may be accelerated by removing the central cores or by destruction of lesions



CDC. Sexually transmitted diseases treatment guidelines, 2015. MMWR Recomm Rep. 2015 Jun 5;64(RR-03):1-137.

Molluscum Contagiosum-Tx

- Clinical course is usually self limited
  - *With no treatment, expect resolution in 2-12 months*
  - *In immunocompetent kids, Tx optional*
  - *Avoid treatments that cause scaring*



Courtesy of Wikimedia Commons

van der Wouden JC, vet al. Interventions for cutaneous molluscum contagiosum. Cochrane Database Syst Rev. 2017 May 17;5:CD004767.

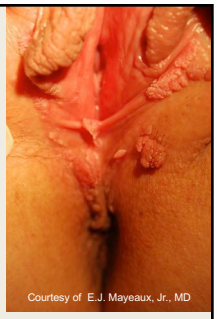
Molluscum Contagiosum-Treatment

- Cryotherapy – 1st line
  - *Cotton-tipped swab in liquid N2 applied for 6 to 10 seconds*
  - *Scarring and hypopigmentation AEs*
- Curettage – 1st line - physical removal
  - *May require anesthetic*
- Cantharidin – 1st line - physical removal
- Laser – OK but expensive
- Imiquimod – No better than placebo

van der Wouden JC, vet al. Interventions for cutaneous molluscum contagiosum. Cochrane Database Syst Rev. 2017 May 17;5:CD004767.

LSIL of vulva (Warts)

- Diagnosis
  - *Usually clinical (appearance)*
  - *Biopsy if uncertain or suspect HSIL*
- Treatment
  - *Based off size/location and symptoms, as well as patient preference*



Courtesy of E.J. Mayeaux, Jr., MD

LSIL of Vulva

- HPV 6 or 11 caused 90%
  - *HPV 16, 18, 31, 33, and 35 are found occasionally as coinfections*
  - *Also associated with conjunctival, nasal, oral, and laryngeal warts*
- Usually asymptomatic
  - *Can be painful or pruritic*

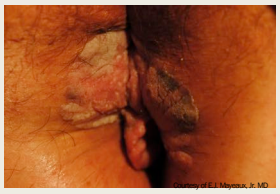
CDC. Sexually transmitted diseases treatment guidelines, 2010. MMWR . 2010 Dec 17;59 (RR-12):1-110.

Treatment	Action	Side Effects	Response rate	Recurrence rate
TCA	Chemical coagulation of proteins	Pain, burning, local irritation	51-81%	36%
Podophyllin	Antimitotic agent: induces local tissue necrosis	Pain, local irritation	45-77%	13-100%
Imiquimod	Immune enhancer, stimulates local cytokine production	Redness, irritation, vesicles, hypopigmentation	37-54%	6-26%
Sinechatechin	Unclear – might be immune enhancer	Burning, pain, ulcerations, vesicular rash	41-58%	7-11%
Excision (knife) (electrosurgery)			89-93% 94%	19-29% 14-22%
Laser Cryo			60-100% 44-75%	Up to 77% 21-42%

Courtesy of Colleen K Stockdale, MD, MS

Biopsy??

- *Always biopsy* for failure to respond to treatment for condyloma!!
- Need to rule out dysplasia / cancer



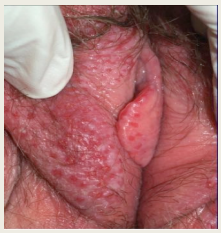
Vulvar SCC

Courtesy of E.J. Moyeaux, Jr. MD

Things that go OUCH in the night

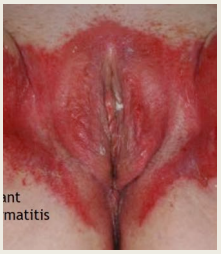
Contact Dermatitis

- Most common cause of vulvar pruritis
- Allergic reaction is UNCOMMON
- Primary irritant is MOST COMMON
- Usually spares the folds
- Can occur with ANYONE (unlike allergy!)
- Often erosive/ulcerative

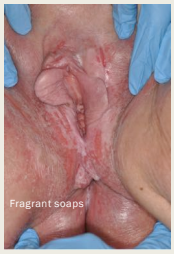


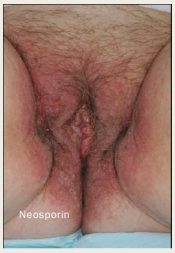
Common Irritants

- Body fluids
- Excessive bathing
- Feminine hygiene products
- Medications



Contact Dermatitis





Photos: Lynn Margesson

Common Vulvar Irritants and Allergens

- Adult or baby wipes
- Antiseptics (eg, povidone iodine, hexachlorophene)
- Body fluids (eg, semen or saliva)
- Colored or scented toilet paper
- Condoms (lubricant or spermicide)
- Contraceptive creams, jellies, foams, nonoxynol-9, lubricants
- Dyes
- Emollients (eg, lanolin, jojoba oil, glycerin)
- Laundry detergents, fabric softeners, and dryer sheets
- Rubber products (including latex)
- Sanitary products, including tampons, pads
- Soaps, bubble bath and salts, shampoos, conditioners
- Tea tree oil
- Topical anesthetics (eg, benzocaine, lidocaine, dibucaine)
- Topical antibacterials (eg, neomycin, bacitracin, polymyxin)
- Topical antimycotics (eg, imidazoles, nystatin)
- Topical corticosteroids
- Topical medications, including trichloracetic acid, 5-fluorouracil, podofilox or podophyllin
- Vaginal hygiene products, including perfumes and deodorants

Stockdale CK, Boardman L. Diagnosis and Treatment of Vulvar Dermatoses. Obstet Gynecol. 2018 Feb;131(2):371-386.

Patient Counseling

Avoid (Vulvar Irritants and Allergens)

- Detergents
- Soaps
- Perfumes
- Many over-the-counter and prescribed topical medications
  - *(eg, anesthetics, steroids, antifungals, antibiotics)*
- Douching; vaginal washing

Include (Routine Vulvar Care Measures)

- Mild soaps, but avoid use on the vulva
- Cleanse vulva with water only
- Gently pat the vulva dry after bathing
- Apply preservative-free emollient to hold moisture in the skin and improve barrier function
- Use pericare bottle to rinse after urination
- Use 100% cotton menstrual pads
- Use adequate lubrication for intercourse (silicone-based lubricants recommended)

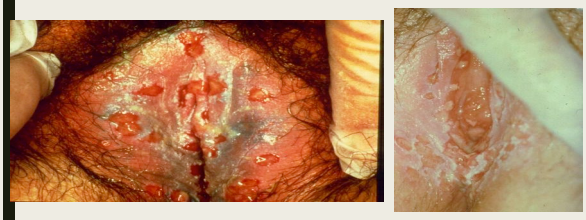
Stockdale CK, Boardman L. Diagnosis and Treatment of Vulvar Dermatoses. Obstet Gynecol. 2018 Feb;131(2):371-386.

Remember

VAGISIL MAKES YOU ILL

BENZOCAINE WILL GIVE YOU PAIN

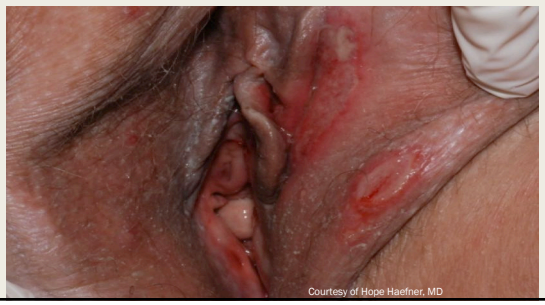
Genital Herpes Simplex



Source: Centers for Disease Control and Prevention

140

Herpes



Courtesy of Hope Haefner, MD

Genital HSV Infections

- Chronic, life-long viral infection
- HSV-1 and (mostly) HSV-2
  - *~50 million persons in the U.S. infected with HSV-2*
- Most persons infected have not been diagnosed
  - *Have mild / unrecognized infections but sometimes shed virus*
  - *Majority of genital herpes infections transmitted by persons unaware that they have the infection or are asymptomatic*
- 3 presentations
  - *Primary*
  - *Non-primary, 1st episode*
  - *Recurrent*

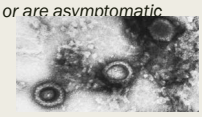


Photo courtesy of the CDC

Workowski KA, Bolan GA. Sexually transmitted diseases treatment guidelines, 2015. MMWR Recomm Rep. 2015 Jun 5;64(RR-03):1-137.

Genital Herpes Simplex - Clinical Manifestations

- Transmission through direct contact – usually during asymptomatic shedding
- Primary infection commonly asymptomatic; symptomatic cases sometimes severe, prolonged, systemic manifestations
- Vesicles ⇒ painful ulcerations ⇒ crusting
- Recurrence potential

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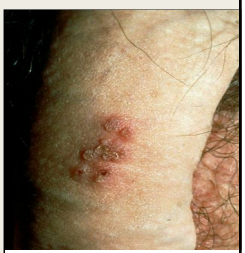
Herpes Simplex

- Genital
  - *Grouped vesicles or erosions on an erythematous base*
- Primary versus secondary outbreaks
  - *Poor recall of occurrence of primary infections*
  - *Poor recognition by patients of secondary infections*
  - *20% have only 1 known outbreak*
- Ocular HSV -leading world cause of blindness



(Courtesy of Color Atlas of Family Medicine)

Workowski KA, Bolan GA. Sexually transmitted diseases treatment guidelines, 2015. MMWR Recomm Rep. 2015 Jun 5;64(RR-03):1-137.

HSV Primary Infection

- Systemic symptoms may include fever, malaise, myalgia, and headache
- Symptoms last about 2 weeks, healing 1-2 weeks, viral shedding 2-3 weeks

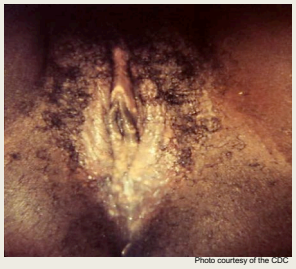
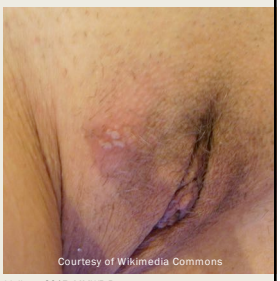


Photo courtesy of the CDC

Workowski KA, Bolan GA. Sexually transmitted diseases treatment guidelines, 2015. MMWR Recomm Rep. 2015 Jun 5;64(RR-03):1-137.

Recurrent HSV

- 50% prodrome
- Shorter time to healing
- Less viral shedding
- Less systemic symptoms
- Psychologically challenging



Courtesy of Wikimedia Commons

Workowski KA, Bolan GA. Sexually transmitted diseases treatment guidelines, 2015. MMWR Recomm Rep. 2015 Jun 5;64(RR-03):1-137.

HSV Diagnosis

- Physical Exam: may have classical painful multiple vesicular or ulcerative lesions
- Confirmed by virologic or type-specific serologic tests
  - *Cell culture and PCR are the preferred tests*
  - *PCR assays for HSV DNA are more sensitive and are most used*
  - *Failure to detect HSV by culture or PCR does not indicate an absence of HSV infection, because viral shedding intermittent*

Workowski KA, Bolan GA. Sexually transmitted diseases treatment guidelines, 2015. MMWR Recomm Rep. 2015 Jun 5;64(RR-03):1-137.

Herpes Simplex: Treatment

- Local care/anesthetics (lidocaine)
- Gentle cleansing in genital region
  - Cetaphil lotion cleansers
  - Sitz baths
- Evaluate for other STDs!!
- Educate on natural history
  - *ASHA Herpes Hotline 919-361-8488/ 800-227-8922*

Herpes Simplex: Treatment Oral and Genital

- Antiviral therapy
  - *Shortens duration of symptoms*
  - *No reduction frequency of recurrences*
- Topical therapies
  - *Reduce time to healing by at most 1 day*
  - *Symptomatic control*

HSV Treatment

Drug	Primary Infection Dosage	Recurrent Infection Dosage	Chronic Suppressive Therapy
Acyclovir (Zovirax)	200 mg 5 times daily or 400 mg 3 times daily for 7-10 days	800 mg twice daily for 5 days or 400 mg 3 times a day for 5 days** or 800 mg 3 times a day for 2-5 days	400 mg PO twice daily*
Famciclovir (Famvir)	250 mg 3 times daily for 10 days	125 mg twice daily for 5 days*** or 1000 mg twice daily for 1 day or 500 mg once, followed by 250 mg twice daily for 2 days	250 mg PO twice daily*
Valacyclovir (Valtrex)	1 g twice daily for 10 days*	500 mg twice daily for 3 days or 1 g once a day for 5 days**	500 mg to 1 gram PO daily*

In HIV infection: *double the dose **double the duration. ***500mg dose

Workowski KA, Bolan GA. Sexually transmitted diseases treatment guidelines, 2015. MMWR Recomm Rep. 2015 Jun 5;64(RR-03):1-137.

Genital Herpes Simplex Tx: Chronic Suppression > 6 outbreaks/year

- Acyclovir (200 to 400mg bid)
  - *28-67% recurrence free for 12 months*
  - *10 fold reduction in recurrence rate*
  - *48% reduction in transmission rate b/w partners*
  - *203-337 days median time 1st recurrence*
- Famciclovir (250 mg BID PO)
  - *time to first recurrence (120 versus 82 days with placebo)*
  - *free outbreaks (78 versus 42%)*
- Valacyclovir (500 mg/day)
  - *reduced frequency of recurrences 85%*
  - *caution in immunosuppressed TTP/HUS*

Workowski KA, Bolan GA. Sexually transmitted diseases treatment guidelines, 2015. MMWR Recomm Rep. 2015 Jun 5;64(RR-03):1-137.

Chronic Suppression: Genital HSV Tx

- Does not alter natural course of disease
- Continued asymptomatic shedding
  - *Decreased symptomatic partner 75%*
  - *Decreased partner seroconversion 48%*
- Condom use reduces male to female transmission by 60-80%

Things that keep you up at night

(Psst, I'm talking about precancer/cancer)

LSIL of vulva
- Condyloma/HPV effect (6, 11)

HSIL of vulva
- VIN usual type (warty, basaloid, etc)
- Carcinogenic HPV

Differentiated VIN
- NOT associated with HPV
- Associated with other vulvar dermatoses

U.S. Genital HPV Statistics

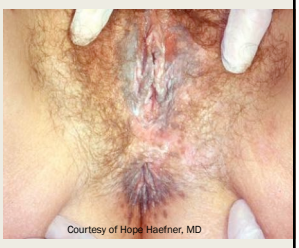
- By age 50, ~75-80% of men and women will acquire genital HPV [1]
  - *~6.2 million new infections/year* [1]
  - *~20 million active infections* [2]
- Highest prevalence = 20-24 year old [3]
- High physical and emotional burdens with HPV infections and HPV-related diseases [4]

Common HPV Types

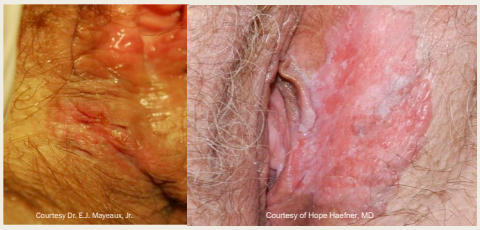
Type	HPV Types	Disease Manifestations
High risk	16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 68, 73, 82	Low-& High-grade cervical changes[1] Cervical cancer[1,2] Vulvar and Anal cancers[1] Head and neck cancer[3]
Low risk	6, 11, 40, 42, 43, 44, 54, 61, 70, 72, 81	Benign low-grade cervical changes[1] Condylomata acuminata[1] Recurrent respiratory papillomatosis[4]

Vulvar HSIL presentation/distribution

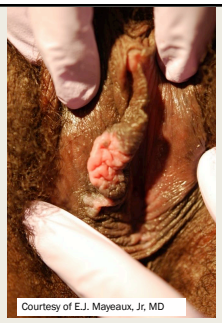
- Variety of colors
- white/brown/red
- Commonly raised (macular)
- Commonly multifocal
- Commonly found in non-hair bearing areas
- Can extend into vagina and to anus!

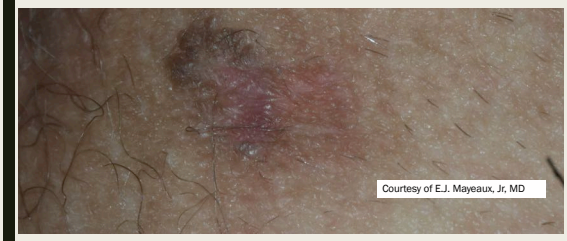


Red HSIL



Vulvar White HSIL

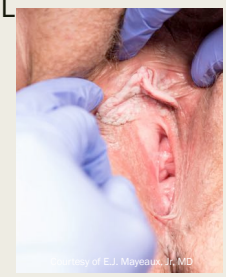




Vulvar Gray/Brown HSIL

Risk Factors for Vulvar HSIL

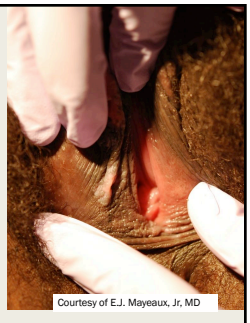
- HPV (vulva, vagina, cervix)
- Cigarette smoking
- Immunosuppression
  - *Pregnancy*
  - *HIV*
  - *Autoimmune disorders*
  - *Diabetes*
  - *Transplant recipient*
  - *Chronic hepatitis*
  - *Chemotherapy*



Jones RW, et al. Obstet Gynecol 1997; 90:448. Committee Opinion No.675. Obstet Gynecol. 2016 Oct;128(4):178-82.

Symptoms

- Most - completely asymptomatic
- Itching or burning
- Irritation
- Dyspareunia

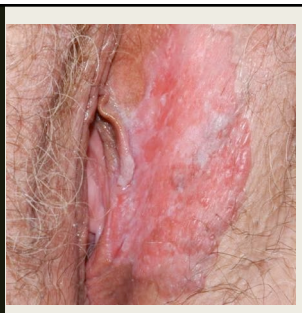


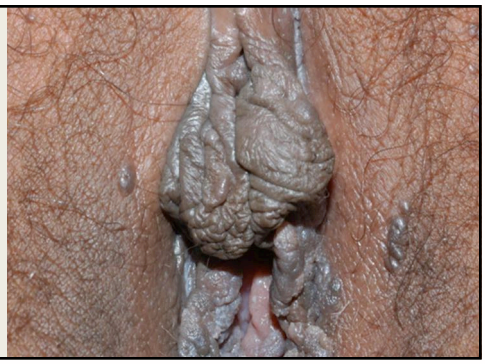
HSIL Behavior

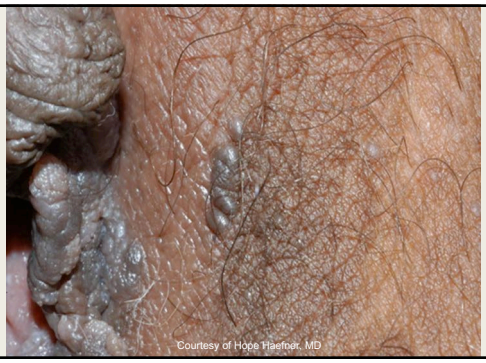
Progression to Vulvar SSC	~5-6%
Regression rate	~1% (<35 years old)
Risk factors for progression	Immunosuppressed, smoking, age, radiotherapy
Lifelong risk	Recurrence of HSIL, vulvar cancer
Screening	Pap with HPV

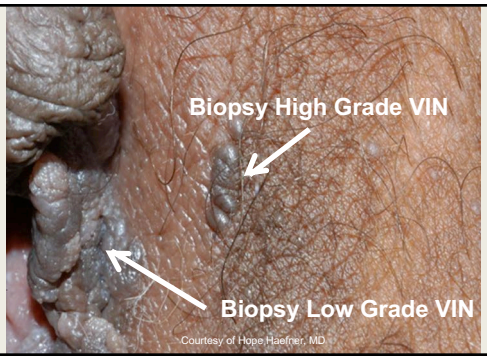
When to biopsy vulvar lesion?

- Malignancy suspected
  - *Non-healing ulcers*
  - *Color variation*
  - *Irregular borders/asymmetry*
- If diagnosis cannot be made through visual inspection!
- Persistent lesions that don't resolve with standard therapy
- Resolve patient concerns









Treatment of HSIL: Surgical

- Cold Knife (preferred)
- LEEP with path specimen
- Laser ablation (if no concern for invasion)

Medical Treatment for HSIL

OFF LABEL USE

Imiquimod 5%

- Two to three times weekly for 12-16 weeks
- Colpo every 4-6 weeks during treatment - Excision for failures
- Pain and erythema may limit use

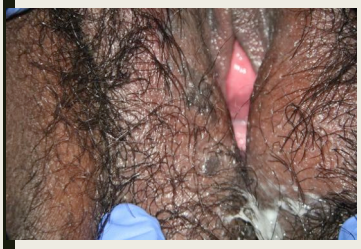
Cidofovir 1%

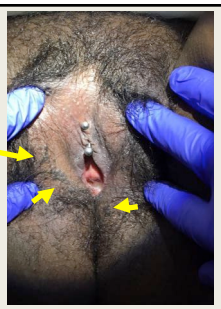
- Response similar to Imiquimod in 2016 Cochrane review
- Hair bearing skin unresponsive. Tends to ulcerate

Photodynamic Therapy

- ALA sensitizer + light = cell death
- Quality of evidence "poor" in 2016 Cochrane review

Garner EI, et al. Treatment for vulvar intraepithelial neoplasia. Cochrane Database Syst Rev. 2016 Issue 8. Art. No.: CD007459.





Vulvar HSIL (VIN usual type) Treatment

- Recommended for *all women with HSIL*
- Excision, laser ablation, or topical imiquimod (off-label use)
- Wide local excision should be performed if cancer is suspected
  - *Even if biopsies show vulvar HSIL*
- Remain at risk of recurrent disease and cancer throughout their lifetimes
- Women with a complete response to therapy and no new lesions at follow-up visits scheduled 6 months and 12 months should be monitored by visual inspection of the vulva annually thereafter

Imiquimod 5%

- RTCs show topical imiquimod 5% is effective for vulvar HSIL
  - *Not approved by the U.S. FDA for this purpose*
- 2-3 times weekly application to affected areas for *minimum 12 weeks*
  - *Colposcopic assessment at 4-6-week intervals during treatment*
- Residual lesions require surgical treatment
- Side Effects = Erythema and vulvar pain
- *May have decreased effectiveness with immunocompromised*

Post-Treatment Surveillance

Follow at 6 and 12 months, then yearly

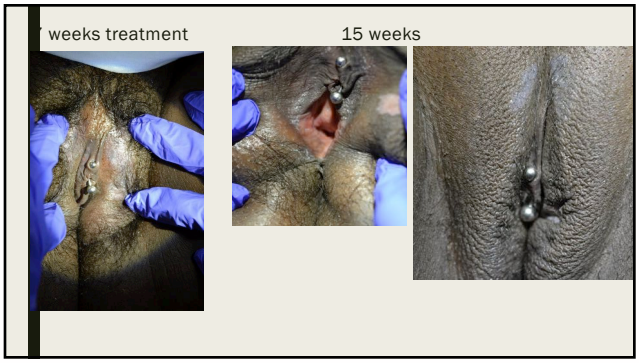
- ASCCP/ACOG Committee Opinion #675, Oct 2016

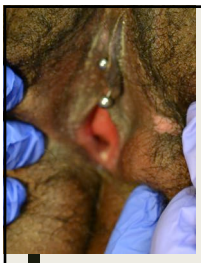
Follow Q6 months x 5 years, then yearly

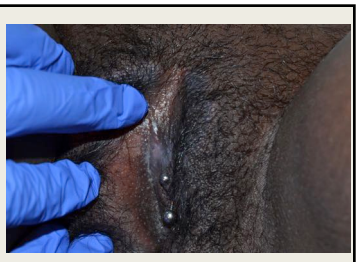
- Satmary W, et al. Gynecol Oncol (2017)

Follow Q3 months for 2-3 years, then Q 6 months

- Best Practice and Research Clinical ObGyn 2014







2 weeks

RECAP

- Vulva is a host to many disease and is often ignored
- Thorough evaluation can improve patient satisfaction
- ….and save lives!
- It's interesting! (at least, to me)

RECAP

Education is vital!!

Explain disease processes and discuss expectations!!

Questions?