The Forgotten Pelvic Organ

Most visible genital structure
- Differs from the skin and mucocutaneous surfaces of the rest of the body
- All three embryologic layers coalesce
- Contains foreign proteins and antigens (reproduction)
- Unique immunologic response
- Labia majora skin looser (more edema can form)

Normal Vulva
Normal Vulva – function/anatomy

- Protects, sexual response – clitoris, able to stretch to accommodate childbirth
- Anatomy
  - Mons pubis
  - Urethral meatus
  - Labia majora, labia minora (Hart’s Line)
  - Vestibular glands
  - Clitoris and clitoral hood
  - Bartholin glands
  - Vaginal vestibule

Vulvar Dermatosis

- Present in variety of ways
- Asymptomatic to chronic disabling conditions
- Difficult to treat – poorly reported by patient
- Severe impact a woman’s quality of life
- Associated symptoms
  - Pain, itching, fissuring, bleeding after intercourse, edema, swelling
- Differential diagnosis
  - Vulvar intraepithelial neoplasia, vulvar malignancy, vulvar Crohn’s, ulcerations (STI), plasma cell vulvitis - very rare

Physical Examination of the Vulva

- Thoroughly examine the external structures
- Preferred position is lithotomy with GOOD lighting
- Examine for:
  - Atrophy, tenderness, erythema, induration, fissures, lichenification, ulceration, erosions, hypopigmentation, scarring, phimosis of the clitoris, narrowing of the introitus.
- Palpate for:
  - Tissue tenderness, soft vs. hard tissue
Physical Examination of the Vagina

- Use a speculum in the vagina
  - Ulcerations
  - Loss of vaginal rugae
  - Vaginal pallor
  - Petechiae

- Culture (comorbid conditions with vulvar dermatoses)\(^1\)
  - Check pH
  - Wet mount
  - Pap ?

\(^1\) Barrows, Shaw & Goldstein (2008) J. Sex Med. 5:276-283

To Biopsy or Not to Biopsy\(^1\)?

- Always biopsy vulvar tissue if visual abnormalities
  - 5 mm punch biopsy
  - Sterile technique
  - Closure with one or two absorbable sutures (Vicryl-Rapide)

Complete Examination History

- Exam
  - Skin
  - Eyes
  - Mouth – especially gingival margins
    - Check for ulcers and erosions

- History
  - Daily routine ? Soaps, detergents, douches, antifungal treatment, hygiene sprays, cream and lotions
  - Practices around the time of menses
  - Preparation for intercourse?
### Contact Dermatitis

- **Irritant vs. allergy**
- **Treatment** –
  - REMOVE THE IRRITANT
  - Ice packs
  - Topical steroids to decrease inflammation
    - Triamcinolone 0.1% ointment BID – mild to moderate cases
    - Clobetasol 0.05% ointment daily – severe cases
  - Low dose tricyclic antidepressants
    - 10 – 25 mg at HS tapered off after symptom free several months
- **Follow up** – 1 month after initiating treatment

### Causes of Dermatitis

- Soaps, menstrual pads, panty liners
- Toilet paper, diapers
- Chemically treated fabrics, fabric detergents
- Fabric softeners, feminine sprays
- Cosmetics, spermacides

### Medications

- Benzocaine, hormonal creams, corticosteroids, topical antifungals & antibiotics

### Lichen Simplex Chronicus

- **Eczematous disorder (neurodermatitis, pruritus vulvae, squamous hyperplasia, hyperplastic dystrophy)**
- Intense, chronic itching and/or rubbing
- Itching, scratching, and lichenification (thick, coarse)
- May feel leathery, visible excoriations
- Superimposed infections – yeast and/or bacteria
- BIOPSY

**Patient Education** — break the itch-scratch-itch cycle

**Treatment** — mid to high potency corticosteroids or calcineurin inhibitors to decrease inflammation
**Lichen Sclerosus**

- Chronic, lymphocytic mediated cutaneous disorder
  - 1 in 70 women
  - Average age 51
  - No known etiology – thought to be autoimmune
  - 4 – 6% chance of developing vulvar cancer
  - Any age can develop this condition but most common after menopause

1 Burrows, Shaw & Goldstein (2008) J. Sex Med. 5:276-283

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**Subjective Presentation**

- may be asymptomatic vs. itching/pain, dyspareunia
- Less likely to be sexually active
- Either vaginal/oral intercourse or masturbation
- 79% reposted chronic vulvar pain

**Physical Examination**

- "cigarette paper" white atrophic plaques, depigmentation, submucosal hemorrhage
- Scarring/narrowing introitus – distorted architecture
- Almost never involves vagina


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**BIOPSY**

- Distinctive histopathologic changes
  - Hyperkeratosis of the epidermis
  - Epidermal atrophy with loss of rete (networking) ridges
  - Homogenization of the collagen in upper dermis
  - Lichenoid (band-like) inflammatory infiltrate of the dermis

**BEFORE TREATMENT – ALWAYS BIOPSY** - starting corticosteroids will resolve the pathognomonic changes. If areas don’t heal, biopsy to r/o vulvar intraepithelial neoplasia or carcinoma
Lichen Sclerosus

TREATMENT
- clobetasol (Temovate) 0.05% ointment daily for 3 months
- Reduce treatment to 2 – 3 X daily
- May need to continue lifetime

Testosterone was a treatment but not anymore effective than petroleum ointment

Lichen Planus

- Involves 1%
  - Common site is oral but 25% also have vulvovaginal involvement
  - Inflammatory, autoimmune, mucocutaneous disorder with multiple clinical variants involving keratinized skin and mucosal membranes
  - Erosive LP (most common)
    - involves vulva and vagina
  - Papulosquamous
    - involves vulva
  - Hypertrophic
    - involves perineum and perianal area

Lichen Planus – Clinical Findings

- Erosive
  - Glossy, brightly erythematous erosions with white striae
  - May be loss of labia minora
  - Narrowing of introitus – synechiae obliterate vagina opening
  - 70% involves vagina
  - Copious yellow discharge (lymphocytes & parabasal cells)
  - Vulvovaginal-gingival syndrome (plurimucosal LP)
    - Desquamative vulvitis, vaginitis and gingivitis
Lichen Planus – Histology

- Biopsy – edge of a lesion
  - Hyperkeratosis of keratinized skin
  - Irregular acanthosis – saw tooth appearance of rete ridges
  - Prominent granular layer
  - Basal cell liquefaction
- No pathognomonic features so exclude mucous membrane pemphigoid, pemphigus vulgaris and linear IgA bullous disease to determine LP
- Differential erythema multiform, LS

Lichen Planus

- Patient History
  - Burning
  - Itching
  - Vulvovaginal discomfort
  - Dyspareunia
  - Postcoital bleeding
  - Vaginal discharge
  - Changes in the vulvovaginal architecture

- Clinical Finding
  - Friable tissues
  - Hyperkeratotic rough lesions
  - Mistaken for molluscum contagiosum or warts
  - Papules on vulva and perianal skin
  - Poorly demarcated, pink or opaque
  - May be confused with genital warts

- Lesions can be impervious to current therapies

- Treatment
  - Vulvar
    - Daily ultra potent corticosteroid ointment
    - Fluocinonide 0.05% or Clobetasol propionate 0.05%
    - After a warm sitz bath for better penetration
  - Vaginal
    - Hydrocortisone suppositories or ointment on a dilator if there is beginning obliteration
  - Tacrolimus – topical macrolide immunosuppressant*
VIN – Vulvar Intraepithelial Neoplasia

- Rare
- Account for 7% of cancers
- In utero exposure DES
- Similar risk factors HPV
  - HPV infection
  - Previous CIN or cervical CA
  - Current smoking
  - Sexual factors

TREATMENTS
- Topical Agents
  - 5-FU
- Laser Ablation
  - Excellent success
- Radiation
  - No recurrence but vaginal toxicity
- Upper Vaginectomy
  - Treatment of choice

Paget’s Disease

- Anogenital most common site for extramammary Paget’s Disease
- Presents with local pruritus and burning
- Predominately white women
- 15 – 25% associated with invasive vulvar cancer
- Common feature is all extend beyond clinically apparent margins

Vulvovaginal Candidiasis (VVC)

- 2nd Most common (BV)
- Symptomatic 22 – 50%
- Asymptomatic 70% (over 1 yr)
- Cost 1.8 billion
- Sporadic to chronic (consider BV)
- Managed by telephone
- 80% - 90% uncomplicated
- 80.2% C albicans
  - 14.3% C glabrata, 5.9%C parasilosis, 8.0% C tropicalis

- Duong & Flowers, 2007, Obstetrics & Gynecology Clinics, 34 (4)
- Nyirjesy 2008. Vulvovaginal candidiasis and Bacterial Vaginosis 22 (4)
Vulvovaginal Candidiasis (VVC)

- May be nonspecific—especially in elderly population
- Itching, irritation, soreness, burning, dyspareunia
  - External burning with urination
- Examination
  - Redness, swelling, fissures, excoriations, satellite lesions, curd-like discharge
- Culture or microscopic exam
  - If unresponsive to treatment may need test for full spectrum of organisms (added expense)

Vulvovaginal Candidiasis (VVC)

- Treatment
  - Butoconazole (Rx) 5 g daily X 1 day
  - clotrimazole (OTC) 1% cream 5 g X 7 days; 2% cream 5 g X 3 days; 100 vaginal suppository X 7 days; 200 g sup. X 3 days (Rx) 500 g sup. X 1 day
  - fluconazole (Rx) 150 mg oral tablet X 1 day
  - Miconazole (OTC)
  - Terconazole (Rx) 0.4% cream 5 g dly 7 D; 0.8% cream 5 g 3 days
  - Tioconazole 6.5% cream 5 g daily 1 day

Severe VVC
- In 556 women prospective study 2 day dose (day 1 and 3) of fluconazole more effective than 1 dose.

Recurrent VVC (4 or more in preceding year)
- Most were C albicans
- Clotrimazole 5 g suppository weekly
- Fluconazole 150 mg orally once a week

References:
- Sobel, Kapenrick, Zervos 2001 Am J Obstet & Gyn. 185, 363-369
- Sobel, Wiesenfield, Martens. 2004 New England Journal of Medicine, 351(9) 876-83
Bacterial Vaginosis

- Most common affecting 30% of women
- Minor symptoms overlooked
- At risk socioeconomically
  - Younger age, non-Hispanic black or Mexican, less than high school education, at or near federal poverty level, douching, sexually active with multiple male partners.


Bacterial Vaginosis

- Presentation
  - Do Not Culture
    - Amsel’s 4 criteria (92% sensitivity when compared with Nugent Score)
      - Abnormal discharge, vaginal pH > 4.5, positive amine test, more than 20% epithelial cells being clue cells
    - Nugent Score (gold standard) Score > 7 consistent with BV
      - 10 – no lactobacillus (gram-positive) detected – 4 points
      - Many gram-negative or variable rods (anaerobes) – 4 points
      - Many curved gram-variable rods – 2 points

Bacterial Vaginosis

- Treatment
  - Metronidazole
    - 500 mg x 7 days orally
    - Topical 0.75% 5 g x 5 days
  - Tinidazole
    - 1 g dly x 5 days
    - 2 g dly x 2 days
  - Clindamycin
    - 300 mg BID x 7 days
    - Topical
      - 2% cream, 5 g dly x 7 days
      - 2% single dose 5 g x 1 day
      - 100 mg ovules dly x 3 days
  - Boric Acid Suppository
    - 600 mg BID x 14 days

- Prevention
  - Lactobacillus orally
    - Yogurt
    - Kefir Juice
    - Lactobacillus tablets
International Society for the Study of Vulvovaginal Disease
http://www.ISSVD.org