MINI-SYMPOSIUM

Female Dermatology

- Managing Gynecologic Disorders
- Managing Hair Loss

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I. Managing gynecologic disorders
Common Diagnoses

1. Candidiasis
2. Herpes simplex
3. Lichen sclerosus
4. Lichen planus
5. Psoriasis
6. Contact dermatitis
7. Lichen simplex chronicus
8. Squamous cell carcinoma
Basic Premises

• Patient anxiety

• Proper visualization imperative

• Normal variants confusing

• Gentle vulvar skin care is the backbone for disease management
Vulvovaginal Candidiasis

- Presents as vulvar pruritus and burning, vaginal discharge
- Labia are erythematous, moist and macerated; introitus may be hyperemic; classic erythematous satellite lesions are not always seen
- Common in pregnancy, diabetes, immunosuppressed, s/p broad spectrum antibiotic therapy, or associated with long term systemic steroids or tamoxifen treatment
- Check male partner (esp. if uncircumcised)
- Diagnose with fungal culture
Vulvovaginal Candidiasis treatment

- **Topical** – most are OTC (azoles, ciclopirox, nystatin)
  - All are equally effective
  - Beware of contact dermatitis

- **Oral**
  - Fluconazole 150 – 200 mg single dose

- **Chronic recurrent vulvovaginal candidiasis**
  - Six or more episodes per year
  - Fluconazole 200 mg per day x 3 days, then monthly for 1 year
  - Treat also the sexual partner

Herpes Simplex
What Women Say They Think They Have*

- Infections
  - Yeast infection
  - Vaginitis
  - Urinary tract infection

- Other
  - Menstrual complaint
  - Hemorrhoids
  - Urethral syndrome
    (may be on antibiotics)

- Allergy to
  - Condoms
  - Sperm
  - Spermicide
  - Elastic/pantyhose

- Irritation from
  - Bike seat
  - Shaving
  - Douching

*Culture positive for HSV.

Genital Herpes Simplex

• Women newly diagnosed with genital herpes experience psychological distress and worry about future sexual relationships and childbearing.

• Pregnant women with untreated genital herpes during the first or second trimester are at risk of:
  – premature rupture of membrane
  – early preterm delivery (≤ 35 wk of gestation)

Genital Herpes Simplex

- Usually HSV-2, however recent studies show an increase in the proportion of HSV-1. \textbf{HSV 1 now accounts for majority of genital herpes infections in young adults}.
- The majority of individuals with seropositivity to HSV-2 report no history of genital herpes infection.
- Clinical signs
  - Vulvitis or vaginitis
  - May have inguinal LAD and dysuria
  - Females have more systemic complaints/complications than men (extragenital lesions, urinary retention, aseptic meningitis (10%))
Take Sample From Lesions Early for Virus Detection

Testing Methods

1. **Culture**
   - Very sensitive, needs collection of live virus and cells, takes at least 2-5 days to get result

2. **PCR**
   - Preferred diagnostic test, sensitive (4x higher than culture)

3. **Serologic tests (Ab)**
   - Can distinguish serostatus for subtypes
   - NOT useful for active infection (IgM is not type-specific and might be positive during recurrent episodes)

Treatment of HSV-1 and HSV-2

- Antivirals
  - Acyclovir, valacyclovir
  - Famciclovir off-label

- Cesarean delivery is indicated in women with active genital lesions or prodromal symptoms, because these symptoms may indicate an impending outbreak.

Subclinical Viral Shedding

- > 80% of persons with genital HSV-2 shed virus asymptptomatically
- Uncommon in HSV-1 genital infection
- Frequency highest in first year after acquisition
- Responsible for most transmission

Up to 70% of Transmission May Occur During Asymptomatic Viral Shedding

Lichen sclerosus (LS)

• Presents as intense itching early, then pain
• May be accompanied by dysuria, discharge or dyspareunia
• Can present at any age; 15% cases in children
• Female > male at all ages
• Clinical signs
  – erosions and fissures in an “hourglass” pattern
  – Petechiae and purpura
  – whitish lesions with crinkled “cigarette paper” appearance
  – Destruction of normal anatomy (loss of labia minora, clitoral hood, and urethral meatus; labial stenosis or fusion)

Extragenital skin: 10% to 15% of cases (trunk, proximal extremities)
Extragenital involvement usually asymptomatic
Extragenital involvement rare in children
LS Complications

- **Painful** when scratched
- +/- fissures/ulcers
- +/- hemorrhagic bullae
- +/- bluish hue with erosions resembling post-traumatic hemorrhage ➔ may be misdiagnosed
- Constipation
LS Complications

• Increased risk for genital squamous cell carcinoma (SCC)

• 20-year incidence of vulvar SCC = 6.7%

• Human papilloma virus (HPV) infection not found in majority of carcinomas arising in genital LS

• Biopsy suspicious areas
  – nodules, bleeding lesions, hard lesions, lesions refractory to treatment
LS Sequelae

- Obliteration of labia minora and clitoris
- Labial stenosis and fusion
- Scarring and stenosis of vaginal introitus
- Dyspareunia, dysuria, painful defecation, sexual dysfunction
LS Treatment

- **Topical**
  - Clobetasol oint BID until skin color and texture are normal, taper to 2-3 times a week to control symptoms, once asymptomatic decrease strength every 3 months
  - Protopic and Elidel *off label* (SE: burning sensation)
  - Topical estrogen in postmenopausal women
  - 2% topical testosterone = placebo

- Architectural changes do not reverse with treatment in adults.

- In resistant cases, consider topical tretinoin and oral retinoid treatment, or cyclosporine, or MTX, or platelet-rich plasma (PRP) injections → *off label*

Lichen Planus
(LP)
LP

- Autoimmune or cutaneous hypersensitivity reaction
- Ten times less common than LS
- Up to 57% of patients with oral LP have concomitant vulvar LP

Symptoms consist of vulvovaginal pain and burning, dyspareunia, but might be asymptomatic.

Scarring of vulva and vagina can occur with adhesions, vestibular bands, atrophy of labia minora or prepuce, leading to changes that resemble LS.

LP

Four distinct clinical presentations:

1. **Classic**: violaceous papules or plaques in the setting of generalized cutaneous LP
2. **Erosive LP**: mucosal erosions and oral desquamative gingivitis are common
3. **Hypertrophic LP**: hypertrophic white plaques on the vulva
4. **Lichen planopilaris**: follicular keratotic papules are limited to the hair-bearing labia majora and the mons pubis
LP Treatment

• Investigate medications that can trigger lichenoid drug eruptions: NSAIDs, diuretics, and antihypertensives. Mean duration of drug use: 1 week to 6 months.

• Topical
  – Clobetasol ointment BID
  – Protopic and Elidel off label

• Consider oral steroids, azathioprine, mycophenolate mofetil, MTX, antimalarials in severe cases (off label)

• Photodynamic therapy and excimer laser have shown in clinical trials the same efficacy as clobetasol (off label)

• Patients with labial adhesions may benefit from surgery

Psoriasis

- Presentation: vulvar & perianal itching and burning resistant to anti-candidal therapy
- 30 -45 % of patients have genital involvement, 2 -5 % ONLY genital involvement
- Associated with: younger age of onset, nail or scalp involvement
- Irritant contact dermatitis (e.g. urinary incontinence) or candidiasis may trigger psoriasis
- Clinical signs
  - well-demarcated, salmon-red colored patches devoid of scale
  - may also have moist, fine scale
  - psoriasis in other locations of the body

Psoriasis treatment

• Mild or even high potency glucocorticoid may be necessary for significant improvement.
  – Atrophy affects the vulva far less often than crural and intergluteal skin
• Calcineurin inhibitors are useful but off-label.
• Add calcipotriene (vit. D analog) if severe, however, it will often be too irritating for body folds.
• May add antifungals (to treat candida superinfection)
• Systemic treatment rarely indicated, unless too debilitating
  – ixekizumab: clear or almost clear genital skin for 73% of treated patients vs 8% of the placebo group at 12 weeks

Contact Dermatitis

• Presents with erythema, pruritus and pain if severe

• Classification
  1. Irritant (ICD): secondary to
     • overzealous cleanliness, incontinence, chronic diarrhea, bowel disease
  2. Allergic (ACD): can occur from
     • OTC medications (antifungals, antipruritics, etc.)
     • Condoms (latex), lubricants, spermicides
     • Fragrances, including toilet paper
     • Soaps, washes, wipes
     • Specific fabrics and elastic
     • Ingested allergens (e.g., cashew nuts, nickel)
ACD of the vulva

• Most common allergens:

- Fragrance mix: 4%
- Balsam of Peru: 6%
- Benzocaine: 8%
- Quaternium 15: 4%
- Neomycin: 2%
- Terconazole: 7%
- Other: 8%
- Negative: 61%

Contact dermatitis treatment

- Identify and eliminate the allergen
- Cotton panties washed in just plain hot water or hypoallergenic detergent (no fabric softener or dryer sheets)
- No panty hose
- No scented toilet paper
- D/C OTC medications
- Topical pimecrolimus or tacrolimus (*off label*) if possible because topical steroids can cause allergy
- Follow with petrolatum to restore barrier function
- If those fail, systemic steroids and patch test
Lichen Simplex Chronicus

- Manifestation of the itch-scratch-itch cycle
- Feels good to scratch (LS hurts when scratched)
- Diagnosis of exclusion – R/O other entities
  - Primary dermatosis
  - Malignancy (SCC, VIN, etc)
  - Contact dermatitis
  - Infection (fungal, herpes simplex, etc)
- Do a biopsy
LSC treatment

- Optimize epithelial barrier function, stop irritants, reduce heat and sweat
- Break the itch – scratch cycle (pt. education)
  - Sedating antihistamines (10 minutes of nighttime scratching undoes a whole day of treatment)
  - Tap water soaks in tepid water, use cool packs (NOT ice)
- Topical calcineurin inhibitors *(off-label)*
- If these fail, topical superpotent steroids
- May need systemic steroid taper
When Patients Fail to Respond to Therapy, Remember:

- Reconsider diagnosis – was a biopsy done?
- Check for infection – fungal, bacterial, HSV
- Missed a concurrent condition?
- Consider drug induced
- Consider patch testing
- Check compliance
- *Evaluate for squamous cell carcinoma*
SCC

- Risk factors: HPV (16,18, 31,33), smoking, immunosuppression, LS, LP, HIV
- Clinical features: varied presentations
  - erythematous well-demarcated plaques
  - warty white plaques
  - erosions or hyperpigmented patches
  - Bowenoid papulosis-type lesions (red-brown papules on genitalia, may extend to thigh)
- Treatment:
  - SCC in situ: efudex, imiquimod, cryotherapy, surgical excision (MOHS)
  - SCC invasive: surgical excision, consultation with gyn onc or urology/oncology
Gynecological disorders - Pearls

• Patient are anxious – encourage conversation
• Normal variants are confusing
• When in doubt – do a biopsy!
• Gentle vulvar skin care is the backbone for disease management
• If non-responsive to therapy – reconsider diagnosis, evaluate for drug-induced, consider patch testing, check for infection, check for SCC.
Pearls

- Vulvar pruritus most commonly due to LS or LSC
- LS is painful to scratch, whereas LSC is pleasurable to scratch
- LS has risk of development of SCC
  - Gynecologic f/u is important
- LSC may arise from contact dermatitis or infections
- Treatment of choice for LS, LP and LSC of the vulva is high-potency topical steroids
II. Managing Hair Loss
Common Diagnoses

1. Telogen effluvium
2. Alopecia areata
3. Androgenetic alopecia
4. Scarring alopecia
Hair Follicle Biology - Facts

- Human skin: 5 million hair follicles
- Most socially and cosmetically important: 100,000 hair follicles on scalp/eyebrows/eyelashes
- Hair follicles absent on: palms, soles, glans penis, prepuce
- Daily hair loss: 100 hairs
Diagnostic Techniques

• Direct visualization
  – erythema?
  – scale?
  – Broken hairs?
  – follicular ostia visible or not?
  – scarring?

• Nail evaluation

• Hair pull test
• Wood’s light
• Dermoscopy
• Microscopy
Diagnostic Techniques

• Evaluation with light microscopy
  – Hair pathology:
    • Anagen hairs=pigmented distorted hair bulbs with attached IRS and cuticle, like “broomstick ends”
    • Telogen hairs=club bulbs
  – R/O fungal infection
    • KOH test: + hyphae
Telogen Effluvium

“Lots of hair coming out by the roots!”
Telogen Effluvium

- Increased shedding of otherwise normal telogen hairs in response to a pathologic or normal physiologic change in health status

- Hair loss due to an abnormally large amount of hairs entering telogen simultaneously (>100 shed daily)
Telogen Effluvium

Causes

• Postpartum (after 2-6 months)
• Shedding of the newborn
• Post-febrile, post-surgical
• Severe infections, psychological stresses
• Crash protein diets, starvation/malnutrition
• Endocrinopathies and chronic illnesses (HIV, SLE, Other CTD)
Telogen Effluvium

Drug-induced: new or change in dose of medication
- Discontinuation of OCP
- Retinoids
- Anticoagulants (especially heparin)
- Anti-thyroid
- Anticonvulsants
- Beta-blockers
- Statins
Management of Telogen Effluvium

- No specific therapy
- Identify triggers
- Patient reassurance!
- Usually self resolves within several months
- Good prognosis if the inciting event can be identified
Alopecia Areata

• Round or oval patches of non-scarring alopecia (1-5 cm) on scalp, beard, eyebrows, eyelashes, and body hair
• “Exclamation point” hair at peripheral edge (proximal atrophied hair bulb is thinner than distal hair end)
• Yellow perifollicular coloration is a clue
Alopecia Areata

- Postulated to be an autoimmune disease caused by unknown abnormal cell-mediated immune factors and genetic factors (HLA class II association)
- Prevalence is ~ 0.2% of population
- 25% of pts have a positive family history
- Associated diseases: Hashimoto’s thyroiditis, vitiligo, SLE (in children), myasthenia gravis, atopic dermatitis, diabetes, RA, celiac disease, Down syndrome, LP, IBD.
Nail Findings in Alopecia Areata

- Transverse or longitudinal nail pitting in 10% of cases
- Trachyonychia (Twenty-nail Dystrophy): thin, fragile, dull nails with marked longitudinal ridging
- Onychomadesis: idiopathic proximal shedding of nail plate
- Onycholysis: separation of nail plate from nail bed
Alopecia Areata Treatment

Focal or Patchy Alopecia Areata

- Topical monotherapy or combination therapies:
  - Topical corticosteroids
  - Intraleisional corticosteroids
  - Topical anthralin
  - Topical minoxidil
- Excimer laser
- Zinc supplementation

Alopecia Areata Treatment

Extensive Alopecia Areata

- Monotherapy or combination therapies:
  - Contact-sensitivity induction therapy to: squaric acid, diphencyprone
  - Topical irritants: tazarotene, azaleic acid
  - PUVA therapy with topical/oral methoxsalen
  - Pulse prednisone therapy, cyclosporine
  - PDT
  - Tofacitinib off label
  - PRP off label

Hydroxychloroquine, simvastatin → NOT effective

Hair Regrowth: fine, downy and light hair initially (later replaced by darker, coarser hair)

El Taieb, et al. Dermtol Ther. 2017 Jan;30(1)
Alopecia Areata Prognosis

- Unpredictable course, spontaneous resolution in majority of cases (3 months) while some cases are refractory to all treatments

- **Good Prognostic Factors:**
  - Lack of familial disease
  - Later onset – post-puberty
  - Mild severity
Female Androgenetic Alopecia

• Unknown etiology, possibly genetically determined sensitivity of scalp hair to androgens.
• Testosterone levels usually not elevated
• Lengthening of the telogen phase and shortening of the anagen phase of hair growth
• Shorter anagen phase = shorter hairs
• Early onset \(\rightarrow\) r/o hyperandrogenism (labs: testosterone, DHEA-S, 17-hydroxyprogesterone)

Female Androgenetic Alopecia

Comorbidities

• Higher incidence of hyperlipidemia and cardiovascular disease
• No differences in insulin resistance or metabolic syndrome
• High levels of stress and anxiety

Vaya A et al. Clinic Hemorheol and Microcir. 2016; 61(3); 471-7
Female Androgenetic Alopecia

Treatment

- Antiandrogen therapy:
  - Spironolactone
  - Finasteride off-label.
  - Dutasteride off-label.
  - Topical minoxidil. Combine with any of the above.

- Adjuvants:
  - Antimicrobial and anti-inflammatory (ketoconazole shampoo)
  - Nutrient support: biotin, antioxidants

- Hair Transplantation? PRP? Bimatoprost?

Hair Highlights

• Daily hair loss: 100 – sometimes, patient reassurance is all that is necessary.
• Telogen effluvium: major causes include pregnancy, stress, trauma, fever, nutritional deficiencies and medications.
• Telogen effluvium usually self-resolves after several months.
Hair Highlights

• Alopecia areata: 25% with FH and higher incidence of autoimmune disorders
• Bad prognostic factors of alopecia areata: prepubertal onset, alopecia totalis/universalis, duration >5 years, association with atopic triad
• Female pattern androgenetic alopecia: differs from male pattern by its diffuse involvement with sparing of frontal hairline