Outline

• Urticaria
• Alopecia
• Acne in the adult
• Perioral dermatitis
• Onychomycosis
• The red leg
• Grover’s disease

Chronic Urticaria

• 36 yoF complains of 2 mo of urticaria
• Lesions last < 24 hours, itchy
• Failed loratadine 10 mg daily
Chronic Urticaria

- **Urticaria, with or without angioedema > 6 weeks**
  - Lesions last < 24 hours, itch, completely resolve
- **Divided into chronic spontaneous (66-93%) or chronic inducible**
- **Natural history - 2-5 years**
  - > 5 yrs in 20% patients
  - 13% relapse rate
- **Etiology**
  - 30 - 50% - IgG autoAb to IgE or FcεRIα
  - Remainder, unclear

**Chronic Spontaneous Urticaria - Treatment**

- **First line**
  - *H1 antihistamines - 2nd generation*
  - Avoid triggers (NSAIDS, ASA)

- **Second line**
  - High dose 2nd generation AH
  - Add another 2nd generation AH
  - 1st gen H1 antihistamine QHS
  - +/- H2 antagonist
  - +/- Leukotriene antagonist

- **Third line**
  - **Omalizumab**
  - **Cyclosporine**
  - **Dapsone**
  - **Sulfasalazine**
  - **Hydroxychloroquine**
  - **Mycophenolate mofetil**
  - **TNFα antagonists**
  - **Anti CD20 Ab (rituximab)**

What does my “second line” look like?

- Fexofenadine 360 mg am, 180 mg noon, 360 mg pm
- Cetirizine 10 mg BID
- Ranitidine 300 mg QD
- Hydroxyzine 25 mg QHS
- Monteleukast 10 mg QD

- When time to taper, get fexofenadine to 180 mg BID

- H1 antihistamines - 2nd generation
- Avoid triggers (NSAIDS, ASA)

- <40% respond to standard dose H1 blockade
- Can increase to up to 4X standard dose

**Chronic Urticaria - Workup**

- History and physical guides workup
- Labs to check
  - CBC with differential
  - ESR, CRP
  - TSH and thyroid autoantibodies
  - Liver function tests
  - CU Index (FcεRIα Ab or Ab to IgE)
  - Maybe tryptase for severe, chronic recalcitrant disease
  - Maybe look for bullous pemphigoid in an older patient
- Provocation for inducible urticaria

**Eur J Dermatol 2016**
**Allergy Asthma Immunol Res. 2016;8(5):396-403**
**Clin Transl Allergy 2017. 7(1): 1-10**

**BJD 2016. 175:1134–52**
**J Allergy Clin Immunol 2014. 133(3):914-5**
**Clin Transl Allergy 2017. 7(1): 1-10**
CSU- when to refer

- Atypical lesion morphology or symptoms
  - > 24 hours, central duskiness/purpura
  - Asymptomatic or burn >> itch
- Minimal response to medications
  - High dose H1 nonsedating antihistamines
  - H1 sedating antihistamines
- Associated symptoms
  - Fever, fatigue, myalgias, arthralgias
- Elevated ESR/CRP

Alopecia

Alopecia = hair loss

Non-Scarring
- Alopecia areata
- Telogen Effluvium
- Androgenetic alopecia

Scarring
- Traction alopecia
- Trichotillomania (end stage)
- Neutrophil mediated
  - Folliculitis decalvans
  - Dissecting cellulitis of the scalp
- Lymphocyte mediated
  - Lichen planopilaris
  - Frontal fibrous alopecia
- Central centrifugal alopecia
- Chronic cutaneous lupus

Scalp biopsy:
- Area ADJACENT to alopecia, ask for TRANSVERSE sections
- ALL scarring alopecias OR nonscarring alopecia where diagnosis uncertain

Alopecia Areata

- Affects up to 0.2% US population
- Types
  - Relapsing remitting
  - Ophiasis (band like along occipital scalp)
  - Alopecia totalis (all scalp hair)
  - Alopecia universalis (all scalp and body hair)
- Associations
  - Atopic disease
  - Autoimmune thyroid disease
  - Vitiligo
  - Inflammatory bowel disease
  - APECED syndrome
Alopecia Areata: Round or oval patches of nonscarring alopecia

Alopecia Areata: Exclamation point hairs

Alopecia Areata: Ophiasis pattern

Alopecia Areata

- IL triamcinolone
  - 10mg/ml
  - q month
- Immunosuppression (recurs after stopped)
  - Pulse steroids
  - Methotrexate
  - Cyclosporine
- Contact sensitization
- Minoxidil
- Antihistamines
- Simvastatin/ezetimibe
- Tofacitinib
Telogen Effluvium

- Normal hair cycle
  - Anagen 90-95%
  - Catagen
  - Telogen 5-10%
  - Normal shedding is 50-100 hairs/day
- Transient shifting of hair cycle
- Shedding
- No scalp itch or rash

Telogen Effluvium - Causes

- Postpartum
- Chronic (no cause)
- Post febrile
- Severe infection
- Severe chronic illness (SLE, HIV, etc)
- Severe prolonged stress
- Post major surgery
- Endocrinopathy
  - Thyroid, parathyroid
- Crash diets, malnutrition, starvation
- Medications
  - Stopping OCP, retinoids, heparin, PTU, methimazole, anticonvulsants, β-blockers, IFN-α, heavy metals

Telogen Effluvium

- Examination
  - Diffuse thinning
  - Hair pull
    - Diagnostic > 20% hairs are telogen
    - Look for bulb at end of hair shaft
- Workup
  - TSH, Vit D, Fe, ferritin, chemistry
  - Biopsy if > 6 mo (r/o AGA)
- Treatment
  - Address underlying etiology
  - Replete ferritin if < 40 ng/dl
  - Minoxidil
  - Reassurance (most regrow almost all lost hair)

Androgenetic Alopecia

- Male or female pattern hair loss
- Female
  - Complain of widening part
  - Retain anterior hairline
  - Early onset/severe: workup for hyperandrogenism
    - F/T testosterone, DHEAS, 17-OH progesterone
- Often “exposed” by telogen effluvium
- Treat with
  - Minoxidil 5% (F QD, M BID)
  - Spironolactone (female)
  - Finasteride- up to 5mg/d
    - NOT for women of childbearing potential
Some scarring alopecias

Traction Alopecia

Chronic Cutaneous LE
Lichen Planopilaris

Approach to the Adult Acne Patient

Acne Pathogenesis, Clinical Features, Therapeutics

Pathogenesis
- Excess sebum
- Abnormal follicular keratinization
- Propionibacterium acne
- Inflammation

Clinical Features
- Oily skin
- Non-inflammatory open and closed comedones ("blackheads and whiteheads")
- Inflammatory papules and pustules
- Cystic nodules

Therapeutics
- Retinoids
- Spironolactone
- Salicylic acid, retinoids
- Benzoyl peroxide
- Antibiotics (topical and oral)
- OCPs
- Isotretinoin

Acne Treatment
- Mild inflammatory acne
  - benzoyl peroxide + topical antibiotic (clindamycin, erythromycin)
- Moderate inflammatory acne
  - oral antibiotic (tetracyclines) (with topicals)
- Comedonal acne
  - topical retinoid (tretinoin, adapalene, tazarotene)
- Acne with hyperpigmentation
  - azelaic acid
- Acne/roacea overlap /seborrheic dermatitis-
  - sulfur based preparations
- Hormonal component
  - oral contraceptive, spironolactone
- Cystic, scarring - isotretinoin
  - Teratogenic, hyperglycemia, transaminitis, cheilitis, xerosis, alopecia (telogen effluvium)
Acne Therapy Guidelines

- Limit oral antibiotics to 3-6 mo
- All patients should receive a retinoid for maintenance
  - Tretinoin
  - Tazarotene
  - Adapalene (now OTC)

Topical Retinoids

- Side effects
  - Irritating- redness, flaking/dryness
  - May flare acne early in course
  - Photosensitizing
  - Tazarotene is category X in pregnancy !!!

Acne in Adult Women

- Often related to excess androgen or excess androgen effect on hair follicles
- Other features of PCOS are often not present—irregular menses, etc.
- Serum testosterone can be normal
- Spironolactone 50 mg-200mg daily with or without OCPs

Acne Pearls

- Retinoids are the most comedolytic
- Topical retinoids can be tolerated by most
  - Start with a low dose: tretinoin 0.025% cream
  - Wait 20-30 minutes after washing face to apply
  - Use 1-2 pea-sized amount to cover the whole face
  - Start BIW or TIW
- Tazarotene is category X in pregnancy
- Back acne often requires systemic therapy
- Acne in adult women- use spironolactone
  - No need to check K+ in healthy adult women

JAAD 2016; 75: 1142-50
Perioral dermatitis

• Women aged 20-45
• Papules and small pustules around the mouth, narrow spared zone around the lips.
• Asymptomatic, burning, itching
• Causes
  – Steroids (topical, nasal inhalers)
  – Fluorinated toothpaste
  – Skin care creams with petrolatum or paraffin base or Isopropyl myristate (vehicle)

Perioral Dermatitis: Treatment

• Stop topical products
• Topical antibiotics
  – Clindamycin
• Topical or oral ivermectin
• Oral tetracyclines
• Warn patients of rebound if coming off topical steroids
• Avoid triggers

Onychomycosis
Onychomycosis

• Infection of the nail plate by fungus
• Vast majority are due to dermatophytes, especially *Trichophyton rubrum*
• Very common
• Increases with age
• Half of nail dystrophies are onychomycosis
  • This means 50% of nail dystrophies are NOT fungal

Onychomycosis Diagnosis

• KOH is the best test, as it is cheap, accurate if positive, and rapid; Positive 59%
• If KOH is negative, perform a fungal culture
  • Frequent contaminant overgrowth
  • 53% positive
• Nail clipping
  • Send to pathology lab to be sectioned and stained with special stains for fungus
  • Accurate (54% positive), rapid (<7d), written report
  • Downside: Cost (>$100)

Onychomycosis: Local Treatment

• Laser - insufficient data that it works
• Topical Therapy:
  • Ciclopirox (Penlac) 8% Lacquer:
    • Cure rates 30% to 35% for mild to moderate onychomycosis (20% to 65% involvement)
    • Clinical response about 65%
  • Efinaconazole (Jublia) 10%*
    • Daily for 48 weeks
      • Complete or almost complete cure (completely clear nail) 26%
      • Mycologic cure (neg KOH and neg fungal cx) -55%
  • Tavaborole (Kerydin) 5%*
    • Daily for 48 weeks
      • Complete or almost complete cure (completely clear nail) 15-17%
      • Mycologic cure (neg KOH and neg fungal cx) 31-36%

*Data from pharma website

Onychomycosis Interpreting Nail Cultures

• Any growth of *T. rubrum* is significant
• Contaminants
  – Not considered relevant unless grown twice from independent samples AND no dermatophyte is cultured
  – Relevant contaminants:
    • *C. albicans*
    • *Scopulariopsis brevicaulis*
    • *Fusarium*
    • *Scytalidium* (Carribean, Japan, Europe)
  – Especially in immunosuppressed patients
Onychomycosis: Systemic Treatment

- Itraconazole:
  - 200 mg/d for 3 months
  - 400 mg/d for one week per month for 4 months
- Terbinafine: 250 mg po QD
  - Fingernails: 6 weeks
  - Toenails: 12 weeks
  - Pulse dosing
    - 500 mg daily for one week monthly for 3 months
  - Efficacy: 35% complete cures; 60% clinical cures

Onychomycosis: Assessing Treatment Efficacy

- Nail growth
  - At 2 to 3 months nail begins to grow out
  - Continues for 12 months
- Repeat KOH/culture at 4-6 months
  - If culture still positive, treatment will likely fail
  - KOH may still be positive (dead dermatophytes)
- Failures
  - Terbinafine resistance
  - Non-dermatophyte molds
  - Dermatophytoma

Clinical Response to Terbinafine: Toenail Onychomycosis

Terbinafine Dose: 250 mg/day for 12 Weeks

Baseline | End of Treatment (week 12) | Follow-up (week 72)

The red leg: Cellulitis and its (common) mimics

- Cellulitis/erysipelas
- Stasis dermatitis
- Contact dermatitis
**Cellulitis**
- Infection of the dermis
- Gp A beta hemolytic strep and Staph aureus
- Rapidly spreading
- Erythematous, tender plaque, not fluctuant
- Patient often toxic
- WBC, LAD, streaking
- Rarely bilateral
- Treat tinea pedis

**Stasis Dermatitis**
- Often bilateral, L>R
- Itchy and/or painful
- Red, hot, swollen leg
- No fever, elevated WBC, LAD, streaking
- Look for: varicosities, edema, venous ulceration, hemosiderin deposition
- Superimposed contact dermatitis common

**Contact Dermatitis**
- Itch (no pain)
- Patient is non-toxic
- Erythema and edema can be severe
- Look for sharp cutoff
- Treat with topical steroids

**Contact Dermatitis**
- Common causes
  - Applied antibiotics (Neomycin, Bacitracin)
  - Topical anesthetics (benzocaine)
  - Other (Vitamin E, topical diphenhydramine)
- Avoid topical antibiotics to leg ulcers
  - Metronidazole OK (prevents odor)
Grover’s Disease

Grover’s Disease (transient acantholytic dermatosis)
- Sudden eruption of papules, papulovesicles; often crusted
- Mid chest and back
- Itchy
- Middle aged to older men
- Etiology unknown- heat, sweating
- Risk factors: hospitalized, febrile, sun damage
- Transient
- Treatment: topical steroids (triamcinolone 0.1% cream); get patient to move around

A few simple rules to live by:
- Chronic urticaria- antihistamines at 4x standard dose
- Alopecia- nonscarring (eval, treat) vs scarring (refer)
- Spironolactone for acne in adult women
- Limit duration of oral antibiotics for acne to < 6mo
- Almost all acne patients benefit from topical retinoids
- Onychomycosis treatment efficacy: oral > topical
- Cellulitis is almost never bilateral
- Treat tinea pedis in patients with cellulitis