COMMON SKIN CONDITIONS

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I have no conflicts of interest.
OUTLINE

- Several common case scenarios
- Cases that share a differential diagnosis are grouped together to highlight key features to distinguish them

CASE 1A:

- 85 Y/O male with chronic bilateral lower leg swelling presents with several day history of redness, worsening swelling and pain involving the left lower leg
CASE 1B:

- 75 Y/O male with remote hx of lower extremity DVT with several month history of lower leg redness, itching, and weeping.
  - Has been on several courses of antibiotics with only slight improvement

CELLULITIS VS. STASIS DERMATITIS?
# CELLULITIS VS. STASIS DERMATITIS?

<table>
<thead>
<tr>
<th>CELLULITIS</th>
<th>STASIS DERMATITIS</th>
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<tbody>
<tr>
<td>• Acute change</td>
<td>• Chronic, waxes and wanes</td>
</tr>
<tr>
<td>• Pain</td>
<td>• Itch often&gt;pain</td>
</tr>
<tr>
<td>• Systemic sxs (35-50%): fever, chills, tachycardia, hypotension, leukocytosis</td>
<td>• Systemic sxs absent</td>
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<tr>
<td>• Erythema: well demarcated</td>
<td>• Erythema: ill-defined</td>
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<tr>
<td>• Smooth, taut apperance</td>
<td>• Scale, crust, weeping</td>
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<tr>
<td>• Petichiae, ecchymoses, bullae variable</td>
<td>• Bullae if severe</td>
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<tr>
<td>• +/- lymphangitic streaking</td>
<td>• Secondary infection common</td>
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# ‘IMPETIGINIZATION’ vs. IMPETIGO

- **‘Impetiginization’**: staph secondarily infecting another primary skin condition (e.g. atopic or stasis dermatitis)
- **Impetigo**: superficial skin infection by *S. aureus* or Group A strep  

**Key features:**
- yellow crusting
- May see pustules
**CELLULITIS VS. STASIS DERMATITIS: Management**

**CELLULITIS**
- Strep > Staph
- Cultures not useful
- Oral Rx = IV if patients are not seriously ill
- If improved by 5 days, may stop antibiotics
- Address predisposing factors: swelling, tinea pedis

**STASIS DERMATITIS**
- Topical steroids (triamcinolone ointment)
- Leg elevation
- Compression: Stockings, Unna wraps
- Secondary infection: staph coverage x 5 days
- Chronic edema management

**CASE 2A:**
- 55 y/o female with itching spreading rash on the hand and face, present several weeks
CASE 2B:

- 55 Y/O female with slowly expanding rash on leg over months
  - No improvement despite topical antifungals x weeks, and oral terbinafine x 1 month

TINEA VS. GRANULOMA ANNULARE?
### Tinea vs. Granuloma Annulare

**Tinea**
- Peripheral scale: leading edge of erythema
- ITCH common
- KOH+ for hyphae
- Topical antifungals: improvement within a few weeks
- Oral Tx rarely needed

**Granuloma Annulare**
- NO SCALE!
- Color is more red-brown
- +/- itch---typically not
- Numerous lesions common
- Inflammatory skin disease of histiocytes; cause unknown
- Tx: intralesional>topical steroids

### Case 3A:
- 55 Y/O male with itchy groin rash that initially improved with hydrocortisone but is worsening now.
CASE 3B

• 55 Y/O male with itchy red rash that is spreading from groin creases across upper thighs and buttocks
  – OTC hydrocortisone helps with itch, but not clearing rash

CASE 3C:

• 45 Y/O overweight male with itching and redness affecting groin creases
  – Topical antifungals did not help
  – Hydrocortisone helps but rash recurs after stopping use
CANDIDIASIS vs. TINEA vs. INTERTRIGO

- Satellite papules
- Annular, Peripheral scale
- Erythema +/- fissures
- Absence of peripheral scale
- Absence of satellite papules and pustules

COMMON GROIN RASHES: PEARLS

- **Tinea:**
  - Spares scrotum
  - Involvement of buttocks common

- **Candidiasis:**
  - Satellite pustules or papules scattered at periphery of erythema is helpful diagnostic finding
  - If only partially improves with antifungals, consider overlap with intertrigo: “candidal intertrigo”

- **Intertrigo:**
  - Due to skin-skin friction in moist areas causing irritant dermatitis
  - Topical steroids to calm inflammation
  - Maintenance to prevent flares:
    - Drying powders: Zeasorb, Talcum
    - Barrier ointments: dry surfaces with towel or blow dryer, then apply thin layer of vaseline or zinc oxide paste
CASE 4A:

• 78 Y/O male with history of ‘recurrent shingles’ involving the right ear.
  – Reports multiple episodes over 5 years
  – This flare started several days ago
  – Tender

CASE 4B:

• 82 Y/O female with 5 day history of painful eruption on the back that has spread around towards the breast.
TZANCK PREP of Both Cases: Multinucleated keratinocytes

HSV VS. VZV-SHINGLES
HERPES SIMPLEX VIRUS

• Key features:
  – Grouped vesicles or vesiculopustules on an erythematous base
  – Recurrent episodes affecting the same anatomic area

• Diagnostic tests:
  – Tzanck prep:
    • scrape base of ulcer after un-roofing vesicle, dab lightly onto slide, stain with methylene blue or giemsa (a nuclear stain), evaluate under 40x for multinucleated keratinocytes
  – Viral culture, PCR or Direct Fluorescent Antigen Testing:
    • Unroof vesicle and vigorously scrape or swab base
    • If no intact vesicles, scrape or swab base of ulcer
  – Serum HSV1 or 2 Antibody screening?
    • Not for dx active disease
    • Majority of population is HSV1 Ab positive, so not a good diagnostic test for whether a skin ulcer, blister, skin finding is due to HSV1

HERPES SIMPLEX VIRUS

• Primary infection
  – Signs develop 3-7 days after exposure
  – Findings often more dramatic clinically
  – May have associated fever, lymphadenopathy, malaise, dysuria (genital)

• Recurrence
  – Itching, burning or pain typically precedes active lesions
  – Typically lacks systemic symptoms

• Treatment
  – Acyclovir or Valacyclovir
  – Dosing protocols vary for primary vs. recurrent vs. suppressive dosing and differ for immunosuppressed hosts
SHINGLES / ZOSTER

• **Key features:**
  – Grouped vesicles on an erythematous base in a dermatomal distribution
    • New lesions develop over 3-5 days; Crusting typically occurs in 7 days
    • Pain variable but typically present; Itch common.

• **Diagnostic tests**
  – Diagnosis typically can be made clinically
  – PCR (from base of unroofed vesicle) more sensitive than DFA for VZV.

• **Risk**
  – Increases with age: patients 50% lifetime risk of shingles by 85
  – Impaired T-cell immunity (HIV, iatrogenic) at particular risk

ANTIVIRAL THERAPY FOR ZOSTER

• **Indications for treatment:**
  – Age >50
  – Moderate to severe pain
  – Severe Rash
  – Involvement of face or eye
  – Complications of herpes zoster present
  – Immunocompromised state
ANTIVIRAL THERAPY FOR ZOSTER

• Benefits of Antiviral Tx (when dosed within 72 hrs of onset):
  – speeds resolution of lesions
  – reduces formation of new lesions
  – reduces viral shedding
  – decreases severity of acute pain

• Valacyclovir > Acyclovir
  – better bioavailability and higher serum levels are needed to treat VZV vs. HSV
  – More efficacious at reducing acute pain
  – Dose: 1000 mg TID PO x 7 days

SHINGLES / ZOSTER VACCINE

• Vaccine approved >50 y/o
  – Efficacy at preventing zoster:
    • 70% in 50-59 y/o
    • 64% in 60-69 y/o
    • 38% in >70 y/o
  – Reduces incidence of post-herpetic neuralgia by ~2/3rds (including >70 y/o)
  – Safe in patients w/ hx of Zoster
    • Likely best to wait 3 years after shingles to administer
CASE 5A:

- 55 y/o male with several month history of red scaly patches on central face, eyebrows and hairline

CASE 5B:

- 50 y/o female with intermittent erythematous papules on central face and flushing symptoms
CASE 5C:

- 37 y/o female with 2-3 month history of redness, scaling and acne-like bumps near corner of the mouth
SEBORRHEIC DERMATITIS

• **Key features:**
  - Scaly erythematous patches on central face, scalp, ears, eyebrows, beardline; may involve central chest

• **Management:**
  - Face:
    • Flares: hydrocortisone BID x 3-5 days
    • Maintenance: Ketoconazole cream, Pimecrolimus cream
  - Scalp:
    • Shampoo daily, use dandruff shampoos TIW
    • Topical cortisones for more severe flares and itching

ROSACEA

• **Key features:**
  - Erythrotelangiectatic: redness (telangiectasias), flushing
  - Papulopustular: acne-like papules and pustules

• **Management:**
  - Avoid triggers: spicy foods, alcohol, intense sun, dry skin/wind,
  - Topicals BID:
    • metronidazole, azelaic acid, sulfacetamide, others
  - Orals for flares; ongoing for recalcitrant cases:
    • Tetracyclines, macrolides
  - Flushing/telangiectasias:
    • Laser, topical brimonidine (Mirvaso)
PERIORAL DERMATITIS

- **Key features:**
  - Erythema with scaling and acneiform papules and pustules involving perioral, perinasal, and/or periocular skin
  - *May be unilateral or bilateral*

- **Management:**
  - Therapies overlap with rosacea management
  - Oral therapy more reliable than topical
  - Oral: doxycycline, erythromycin, or amoxicillin x 4-6 weeks
  - Topicals: metronidazole, clindamycin, sulfacetamide

CASE 6A:

- 27 y/o male with scaly thin papules and thin plaques over trunk for 3-4 weeks
CASE 6B:

- 25 y/o male with 2 week history of numerous scaly papules on the trunk and extremities

CASE 6C:

- 30 y/o male with several month history of worsening scaly rash on trunk and neck
PITYRIASIS ROSEA

- **Key features:**
  - Pink to lightly erythematous papules and thin plaques with peripheral *trailing scale*
  - Truncal predominant, axillae, groin
  - Follows skin cleavage lines--- ‘christmas tree’

- **Management:**
  - Reassurance; harmless reactivation of HHV8 virus
  - Self-resolves within 2-4 months
  - Valacyclovir 1 gm TID x 7 days may shorten duration
GUTTATE PSORIASIS

- **Key Features:**
  - Diffuse papules and small plaques with slight scale
  - Strep throat is a common trigger for an acute flare
- **Management:**
  - Treat strep if present
  - Educate: patient is prone to typical psoriasis
  - Topical steroids x2-4 weeks may be sufficient
  - Phototherapy, systemics if not improving

TINEA VERSICOLOR

- **Key features:**
  - Pink, brown or hypopigmented oval patches with subtle scale, coalescing into irregular shaped patches favoring upper trunk, axillae, groin
  - KOH prep: pseudohyphae and spores
- **Management:**
  - Shampoos: selenium sulfide, ketoconazole
  - Creams for localized disease: clotrimazole
  - Oral therapy, if extensive: fluconazole
CASE 7A:

- 42 y/o male presents with new itchy rash that started 7 days after starting Amoxicillin-clavulanic acid for a sinus infection.
  - Afebrile
  - Relative sparing of head and neck, hands and feet
  - Labs normal

CASE 7B:

- 45 y/o male presents with new tender rash and fever 10 days after starting trimethoprim-sulfamethoxazole for leg cellulitis. Cellulitis has resolved.
  - T 39.5 C
  - Conjunctival injection
  - Labs: High Eosinophilia, Transaminitis
### Morbilliform Drug Exanthem vs. Drug Hypersensitivity Syndrome

**Key features**

- Morbilliform eruption starts on trunk, spreads to extremities
- Relative sparing of face, hands, feet
- Itch
- Mild eosinophilia possible
- 5-7 days after offending drug

- Morbilliform eruption
- Facial and acral edema, erythema often present
- Tender, burning skin
- Fever
- Variable systemic symptoms
- High eosinophilia, transaminitis
- 2-6 weeks after offending drug

### DRUG HYPERSENSITIVITY SYNDROME

- Severe, life threatening drug eruption characterized by rash *and* systemic manifestations

- Aka: **D.R.E.S.S.**
  - Drug Rash with Eosinophilia and Systemic Symptoms

- Or... **D.I.H.S.**
  - Drug-Induced Hypersensitivity Syndrome
DRUG HYPERSENSITIVITY SYNDROME

• **Big offenders:**
  - Anticonvulsants (onset 2-6 wks)
  - Sulfonamides (onset 7-14 days)
  - Allopurinol (weeks to months, avg. 7 weeks)
    – Elderly patients w/ renal insufficiency on high doses at particular risk

DRUG HYPERSENSITIVITY SYNDROME

• **Complications:**
  – *Hepatitis*
    • typically most severely affected internal organ
  – *Delayed thyroiditis*
    • Baseline TSH, repeat in 6-12 weeks
  – Rarely:
    • *eosinophilic myocarditis, pneumonitis, nephritis, or encephalitis, SIADH*
D.H.S. TREATMENT

• Admission to initiate treatment and observe for internal organ complications

• Tx: Systemic corticosteroids
  – Prednisone 1 mg/kg/day or equivalent
  – Continue until clinical response
  – Slow taper over 4-8 weeks depending on response.
    • Relapse common with premature cessation of corticosteroids

CASE 8A:

• 72 y/o male presents 2 day hx of itchy swollen rash. Started new medication several days ago.
CASE 8B:

• 40 y/o female with 5 day history rash on arms, hands and erosion across vermillion lip. Had a recent ‘fever blister’ on the cutaneous lip.

CASE 8C:

• 65 y/o M 2 days s/p orthopedic procedure placed on Aspirin, Oxycodone, and Cephelexin, new itchy rash
ACUTE URTICARIA and URTICARIA MULTIFORME

**Key features:**

- Transient edematous erythematous papules and plaques --- individual lesions last <24 hrs
- Annular, arcuate and targetoid (‘multiforme’) lesions possible

**Management:**

- Identify trigger: medications, infections
- Antihistamines, corticosteroids
ERYTHEMA MULTIFORME

• **Key features:**
  – Deeply erythematous to violaceous targetoid papules that last days to weeks
    • favor acral surfaces (palms, soles)
  – Mucosal erosions—lips most common

• **Management:**
  – Identify trigger: medications, herpetic infection
  – Supportive care

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**URTICARIA MULTIFORME**

Morphology
- Annular and polycyclic wheels with central clearing or ecchymotic centers
  • ‘Targetoid,’ annular lesions with purpuric or dusky center, middle ring of pallor and outer ring of erythema

Distribution
- Trunk, extremities, face
  • Palms, soles, though can be anywhere

Duration of lesions
- <24 hrs
  • 2-3 weeks

Oral involvement
- Oral edema, no erosions or blisters
  • Oral erosions or blisters on lips

Facial or acral edema
- Yes
  • Rare

Fever
- Occasional
  • Occasional

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"Urticaria Multiforme": A Case Series and Review of Acute Annular Urticarial Hypersensitivity Syndromes in Children.
Kara N. Shah, Paul J. Heong and Albert C. Yun
Pediatrics 2007;119;e1177; originally published online April 30, 2007;
DOI: 10.1542/peds.2006-1553
SUMMARY

• 8 case illustrative dermatologic clinical scenarios highlighting common diagnoses

• Diagnoses covered:
  – Cellulitis vs. stasis dermatitis
  – Tinea vs. granuloma annulare
  – Candida vs. tinea vs. intertrigo
  – Herpes simplex vs. zoster
  – Seborrheic dermatitis vs. rosacea vs. perioral dermatitis
  – Pityriasis rosea vs. guttate psoriasis vs. tinea versicolor
  – Morbilliform drug exanthem vs. drug hypersensitivity syndrome
  – Urticaria vs. erythema multiforme