Don’t Get Fooled Again

Meg A. Lemon, M.D.
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Conflicts of Interest

- None
Objectives

- Develop proficiency in assessing urgent/emergent dermatoses
- Recognize cutaneous manifestations of systemic illness
- Differentiate steroid responsive dermatoses from those requiring other therapy, and know how to correctly prescribe topical steroids
Don’t Get Fooled Tools

- Don’t panic!
- Think like a doctor
- The skin is an organ system just like any other
- History and Physical Exam are essential to the diagnosis (timing of rash, symptoms, response to therapies tried at home, thorough drug history including ALL topicals, OTCs and herbals)
- The skin has its own specialist: find dermatologists with IM backgrounds/interests who enjoy caring for sick patients, and share your tough cases
Stevens-Johnson Syndrome/Toxic Epidermal Necrolysis
SJS/TEN
(Erythema Multiforme Major, Lyell’s Disease)

- Severe blistering dermatosis
- Mucous membrane involvement (usually marked)
- Spectrum of disease severity
  - SJS “milder” <10% BSA necrosis
  - TEN “more severe” >30% BSA necrosis
SJS/TEN

- Drug associated in >95% cases
- Sulfonamides
- Anticonvulsants
- NSAIDS
- Allopurinol
- Antiretrovirals
- Mycoplasma infection
- Bone Marrow Transplant/GVHD
SJS/TEN

- Prodrome of fever, malaise, sore throat, cough
- Rash usually begins centrally as pink or targetoid macules that coalesce, blister and slough (Nikolsky’s sign)
- Pain is out of proportion to exam in early stages (skin is necrosing)
- Pyrexia usually persists
- MUCOUS MEMBRANE INVOLVEMENT part of diagnostic criteria (usually two or more areas)
- Does NOT itch (urticaria itches)
SJS/TEN

- DDx: urticaria, drug reaction, Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS), Paraneoplastic Pemphigus, disseminated HSV
- Histopathology can be very helpful, especially early in the course, and will differentiate between all of the above
- Mortality 10-50%
- If you’re ever going to call a Dermatology consult, now is the time
SJS/TEN
SJS/TEN
SJS/TEN
Not SJS/TEN
Not SJS/TEN
Compare and Contrast

- **SJS/TEN**
  - Toxic patient
  - Mucous membrane necrosis/sloughing
  - PAINFUL
  - fever

- **Urticaria/Other**
  - Non-toxic patient
  - No mucous membrane involvement
  - ITCH/mild pain
  - Fever uncommon
SJS/TEN Management

- Confirm diagnosis (dermatology consultation/tissue pathology)
- REMOVE OFFENDING AGENT/S ASAP
- Call in other consultants (Ophthalmology, Urology, Pulmonology, Gastroenterology, Nephrology, Gynecology, ID)
- Consider Burn Unit/ICU care: fluid/electrolyte management, pain control, mechanical ventilation, nursing acuity
SJS/TEN

- IVIG shows some efficacy (2mg/kg)
- Corticosteroids no longer used/favored
- Avoid adding other medications unless clearly indicated
- Avoid silver sulfadiazine dressing compounds/thiazide diuretics (sulfa moiety)
- Patients should wear med-alert jewelry for life
DRESS Syndrome

- Drug Rash with Eosinophilia and Systemic Symptoms
- Rash is usually morbilliform (measles-like) and not necrotic
- Fever is common and persistent
- Liver involvement common: HSM, elevated LFTs
- Lymphadenopathy common and may be severe (“pseudolymphoma”)
- Peripheral eosinophilia should be followed closely
- Patient is toxic
DRESS Syndrome
DRESS Syndrome

- Causative agents may include
  - Carbamazipine
  - Phenytoin
  - Sulfonamides
  - Sulfasalazine
  - Allopurinol
  - Minocycline
  - Abacavir
DRESS Syndrome

- Management
  - REMOVE OFFENDING AGENT/s
  - Watch eosinophil counts daily: if they’re rising, you haven’t removed the offending agent
  - Don’t add a bunch of other meds (everything that spikes a fever is not an infection)
  - Fever is persistent: follow cultures and remove unnecessary antimicrobials
  - Patients should wear med-alert jewelry
  - Supportive care/primum non nocere
Don’t Get Fooled
Don’t Get Fooled

- Admission: 67 year-old obese WF with bilateral LE cellulitis.
- PMHx: CAD, HTN, CHF, OSA
Stasis Dermatitis

- Usually bilateral
- ITCH, ITCH, ITCH
- May have pain with edema
- Lichenification
- Pigment changes
- Chronic (history)
- Patient not toxic

In addition: This ITCHES
Cellulitis

- Tissue infection
- Patient is sick
- Fever, leukocytosis
- PAIN at sight of infection
- Entry site (interdigital, “spider bite”)
- Rarely (never) bilateral
- PAIN (not itch) is cardinal sign
Cellulitis
Cellulitis
Cellulitis
Not Cellulitis
## Compare and Contrast

<table>
<thead>
<tr>
<th>Cellulitis</th>
<th>Stasis Dermatitis</th>
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<tbody>
<tr>
<td>Pain</td>
<td>Itch</td>
</tr>
<tr>
<td>Toxic Patient</td>
<td>Non-toxic patient</td>
</tr>
<tr>
<td>Not bilateral</td>
<td>Frequently bilateral</td>
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<tr>
<td>Acute</td>
<td>Chronic</td>
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<tr>
<td>Tx: I&amp;D furuncle, CULTURE the wound/skin, po or IV antimicrobials, surgical consult if needed</td>
<td>Tx: elevation, compression, and topical steroids, CULTURE skin if open, and Rx antimicrobials if cxs +</td>
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Don’t Get Fooled: Fever and Rash

- Broad DDx (Drug, Infectious, Inflammatory, Malignant)
- Clinical H&P, biopsy can usually nail correct diagnosis
- If needed, call for dermatology consultation early in course of admission for best outcome
Fever and Rash
Fever and Rash
Fever and Rash
Fever and Rash
Fever and Rash
Fever and Rash
Fever and Rash
Fever and Rash
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Fever and Rash
Fever and Rash
Fever and Rash

- Don’t panic
- Think like a doctor
- History! Physical Exam! Biopsies! Cultures!
- Call your consulting dermatologist, preferably early in the course
Cutaneous Manifestations of Systemic Disease: Don’t Get Fooled

- Skin is largest organ in the body
- Many disease states have cutaneous manifestations
- History of skin and mucous membrane lesions, fever, photosensitivity, itch, and Family History can help
- ALWAYS try to get the patient undressed
- Lupus/dermatomyositis/vitiligo/hyperlipidemia/psoriasis
Systemic Lupus Erythematosus

- photosensitivity, especially at lower lips, arms/cheek
- blistering with intense sun exposure
- “lacy” erythema
- livedo of lower extremities
- Prominent nail fold capillary loops
SLE photosensitivity
SLE livedo reticularis
SLE nail fold capillaritis
SCLE
DDx SCLE
Dermatomyositis

- Photodistributed, lichenified, variably pruritic rash
- Eyelids: heliotrope rash (violet-hued erythema)
- Knuckles, knees, toes: Gottron’s papules: silvery, lichenified epidermis on erythematous base
- Look for capillary loops at nail fold
- History: difficulty with grooming hair, climbing stairs, “aching” muscles, tender muscles
- Labs: CPK and aldolase, skin biopsy with immunofluorescence, hunt for occult malignancy
Dermatomyositis
Vitiligo

- Complete loss of pigment due to autoimmune destruction of melanocytes
- Hands/orbits/perioral/nipples/axillae/groin/genitals/elbows/knees/feet
- Associated with autoimmune thyroiditis
- Examine thyroid/check TSH at diagnosis, repeat at regular intervals: vitiligo can precede thyroid abnormalities by months to years
- Trial of appropriate topical steroids/TCI
Vitiligo
Hyperlipidemia

- If lipid levels are high enough, lipids will be deposited in skin, close enough to be seen at surface
- Hypertriglyceridemia is most common: may produce xanthelasma of lids, extensor tendons, genitals
- Aggressive treatment reverses many cutaneous findings
Xanthomas
Internal Manifestations of Cutaneous Disease: Psoriasis

- Psoriasis affects roughly 7.5 million Americans
- Types: Plaque, guttate, inverse, pustular, erthrodermic
- Localized disease: scalp, genitals, nails
- All types are same autoimmune disease
- All types associated with increased risk of CAD, obesity, alcoholism, depression, lower QOL scores
- 30% of patients with psoriasis will develop psoriatic arthritis
- Increased risk of SCC and lymphoma
Psoriasis

- Ask about arthritis, including axial skeleton
- Screen for CAD and modify risk factors
- Screen for depression and alcoholism
- If you prescribe topical steroids, give a large volume (180 gms for elbows and knees only)
  - Trunk, limbs, scalp: Clobetasol or fluocinonide
  - Face, axillae, groin/genitals: Desonide

Biologic agents have radically changed outcomes and early data show reduction in CAD risk with biologics
Topical Corticosteroids: Don’t Get Fooled

- Know when to use topical steroids, which to choose and how much to prescribe
- Topical steroids are used to treat inflammatory skin conditions, not infections, infestations, malignancies, histamine-driven diseases
- Enormously helpful when used correctly
- MUST give patients enough medicine and MUST use for long enough duration to get benefit
- Adherence is a problem
- Tachyphylaxis doesn’t occur—patients just stop using meds
Topical Corticosteroids

- Deliver anti-inflammatory effects directly to the organ that is inflamed: more efficacious with fewer side effects than oral steroids
- Ointments penetrate stratum corneum best if the skin is damp
- Ointments have fewer ingredients than cream and are stronger than creams by one step on the steroid ladder
Topical Corticosteroids

- If a rash is red, and especially if it’s scaly, it MIGHT be steroid responsive
- Diagnostic tests can help you decide if a rash will respond to steroids: KOH, bacterial cxs, RPR, scrapings
- Many things that itch are not responsive to topical steroids (e.g., urticaria, yeast/fungal infections)
Steroid UNresponsive
Steroid Responsive
Topical Corticosteroids

- Easiest to have 3 levels of strength in mind:
  - LOW POTENCY: Desonide 0.05%
  - MID POTENCY: Triamcinolone Acetonide 0.1%
  - HIGH POTENCY: Fluocinonide 0.05%

- Low: face, ears, axillae, genitals
- Mid: mild dermatoses on trunk, limbs
- High: hands, feet, scalp, more severe dermatoses or thickened skin
Topical Corticosteroids

- GIVE ENOUGH MEDICINE TO USE BID FOR MINIMUM of 14 DAYS!
- Better to give too much than too little. Remember that adherence with topicals is low over time.
- Hands and feet: 80 gms
- Trunk: 180 gms
- Scalp: 60 cc (as Solution)
- Whole Body: 240-360 gms
- Eyelids: 15 gms
Topical Corticosteroids

- Super-potent agents (clobetasol) can suppress HPA axis when used over large BSA in about 2 weeks
- HPA axis suppression is readily reversible and rarely a clinical problem
- Atrophy of epidermais seen with long term use, and if high potency agents are used on thin skinned areas or in skin folds
- Atrophy is also reversible with time
THANK YOU

for your kind attention
References


  - Friedewald VE et al. Am J Cardiol 2008; 101 (8): 1119-26
References (cont.)

- Steroid Potency Chart: www.psoriasis.org/about-psoriasis/treatments/topicals/steroids/potency-chart