



# “The Red Face” and More Clinical Pearls

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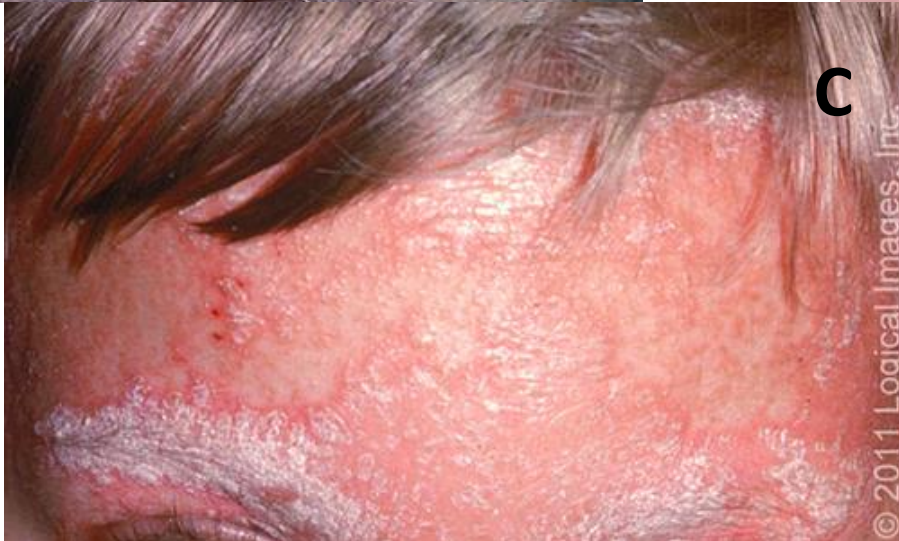
Associates in Dermatology

I have no disclosures or conflicts of interest

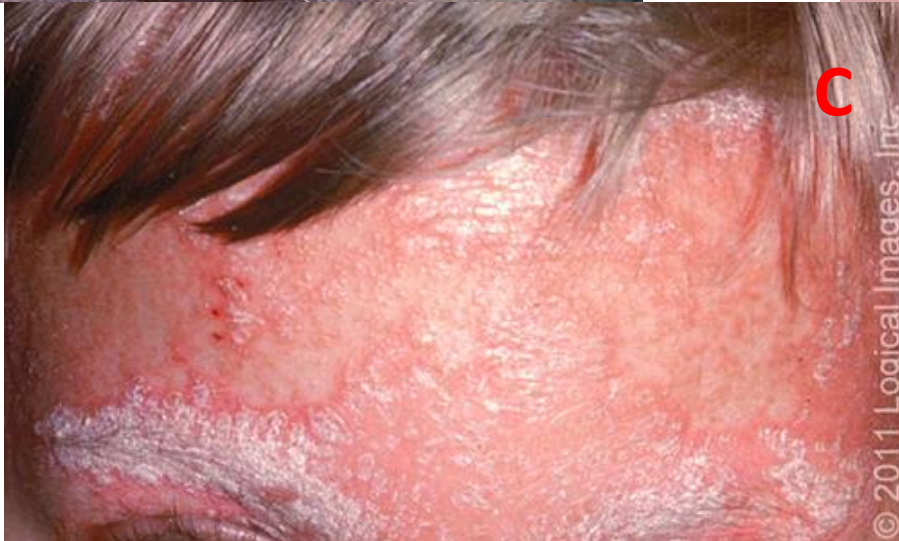
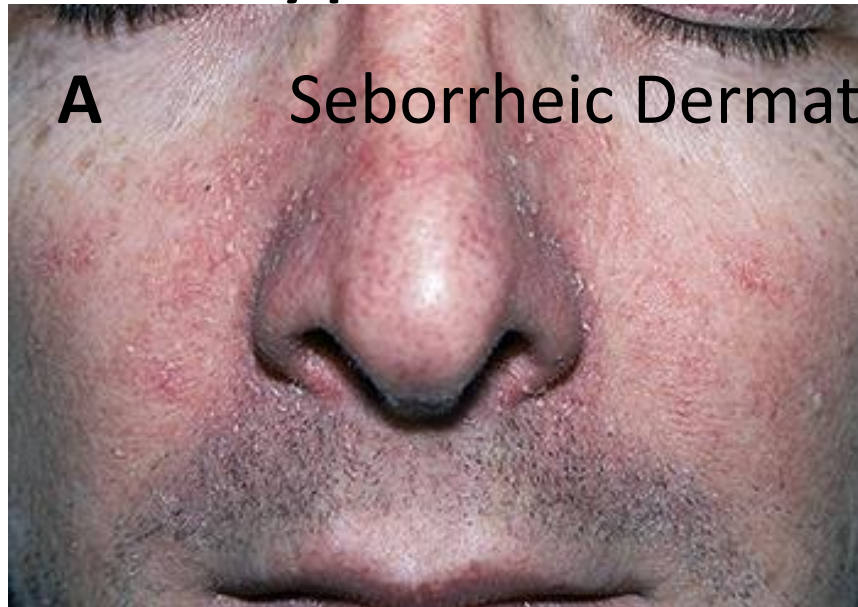
# Part 1: The Red Face: Objectives

- Distinguish and diagnose common eruptions of the face
- Recognize those with potential implications for internal disease
- Learn basic treatment options

Which patient(s) has an increased risk of hypertension and hyperlipidemia?



# Which patient(s) has an increased risk of hypertension and hyperlipidemia?



← ↑  
Psoriasis



# Seborrheic Dermatitis



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# Seborrheic Dermatitis

- Erythematous scaly eruption
- Infants= “Cradle Cap”
- Reappear in adolescence or later in life
- Chronic, remissions and flares; worse with stress, cold weather
- Occurs on areas of body with increased sebaceous glands
- Unclear role of *Malassezia*; could be immune response; no evidence of overgrowth

# Seborrheic Dermatitis

## **Severe Seb Derm: THINK:**

- HIV (can also be more diffuse on trunk)
- Parkinson's (seb derm improves with L-dopa therapy)
- Other neurologic disorders
- Neuroleptic agents
- Unclear etiology





# Clinical Exam

- Erythema/fine scale
- Scalp
- Ears
- Nasolabial folds
- Beard/hair bearing areas
- **Ill-defined**



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# Treatment

- Topical steroids: hydrocortisone 2.5% cream or triamcinolone 0.025% cream if severe
  - \*\*Desonide now \$200!!!! so I never prescribe\*\*
- Topical antifungals: ketoconazole shampoo (to face and scalp), ciclopirox shampoo, ketoconazole cream
- Severe: itraconazole or fluconazole 200mg a day x 7 days

# Facial Psoriasis

- **Well-defined**, more erythematous patches/plaques, +/- silvery scale
- Usually on scalp if also on face; ears
- Check elbows and knees as well
- Symmetric
- Other variants: inverse (folds), guttate (raindrop-like), nails



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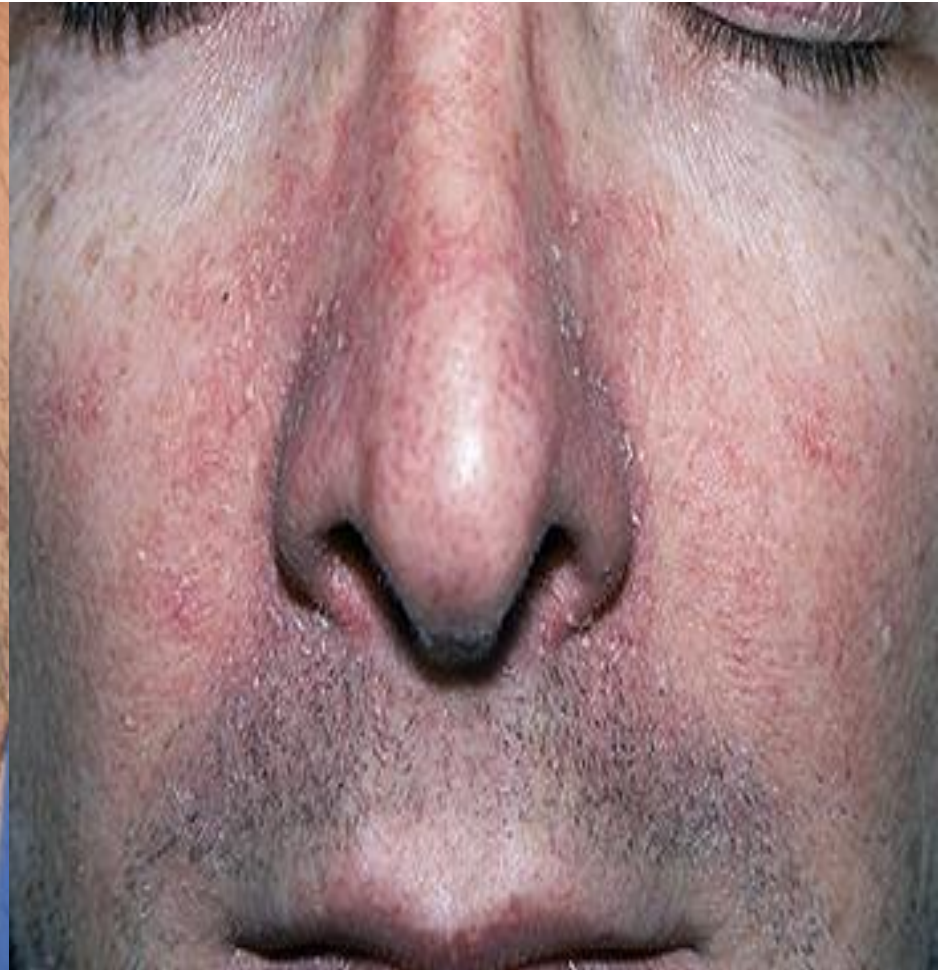
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## Psoriasis



## Seborrheic Dermatitis







# Psoriasis

- 2 peaks in onset:
  - Between ages 30-39, and 50-69
- Complex pathogenesis: genetic + environment
  - PSORS1 locus within MHC on chromosome 6p21
  - HLA-Cw6: higher susceptibility to early onset
  - HLA-B17: more severe phenotype
  - Other susceptibility loci: genes that encode for IL-12 and IL-23
  - Multiple other gene products, including those affecting TNF $\alpha$

# Psoriasis: environmental

## Risk and exacerbating factors

- Smoking: intensity and duration
- Obesity: may contribute to more severe psoriasis, pro-inflammatory cytokines
  - Limited studies on weight loss and impact on psoriasis
- Drugs: beta-blockers, lithium, anti-malarials
- Infections: Strep → guttate; HIV
- Alcohol abuse

# Psoriasis Comorbidities

- Multi-system chronic inflammatory disorder
- Arthritis
- Multiple studies support association of psoriasis and metabolic syndrome
- Independent relationship between diabetes and psoriasis and HTN and psoriasis
- Risk factor for cardiovascular disease
- Risks seen with severe psoriasis, less known about mild psoriasis



# Psoriasis Treatment

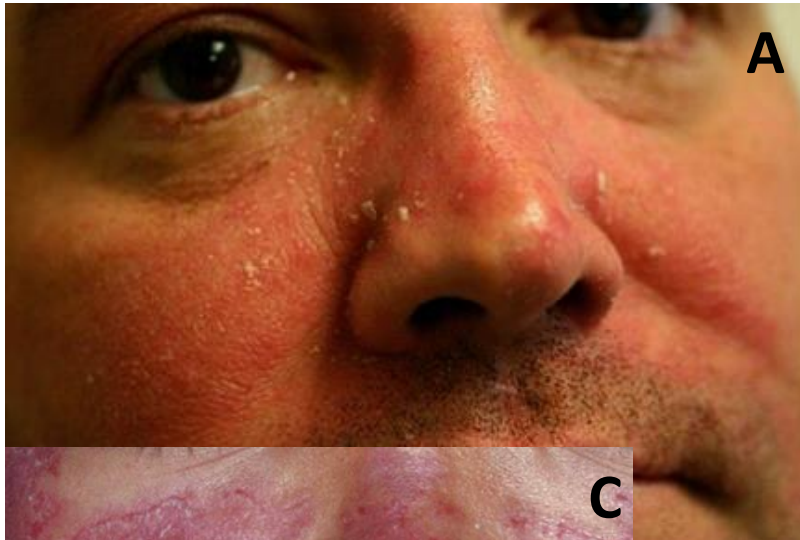
- A retrospective study of 2400 patients with severe psoriasis showed a *significant reduction in cardiovascular events* when treated with methotrexate or a biologic agent
- Reduction of CV events also seen with biologics in treatment of rheumatoid arthritis
- Reduction of pro-inflammatory state

# Seb Derm vs. Psoriasis: Summary

- Seb dermatitis: ill-defined; if severe, think about HIV, neurologic disorders
- Psoriasis: increased risk of metabolic syndrome, independent risks of diabetes and HTN
  - Don't hesitate to refer to a dermatologist!!!
  - Systemic treatment can impact other comorbidities, in addition to huge impact on quality of life
  - Don't forget about arthritis: can be debilitating

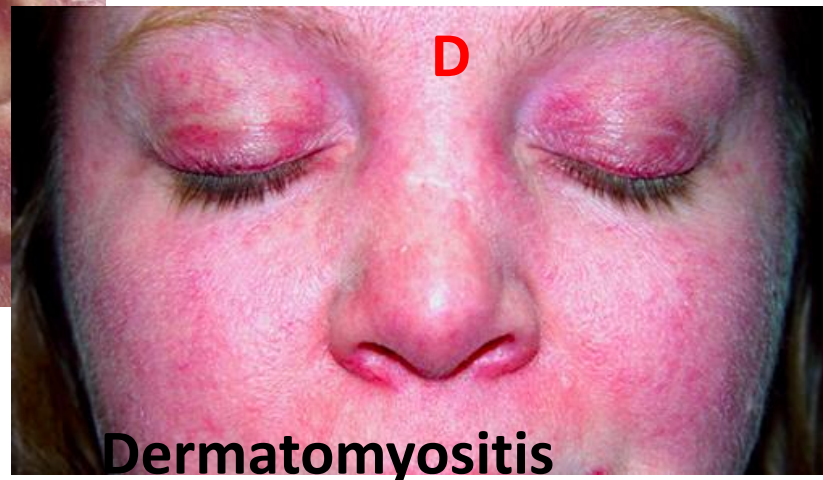
# More Red Faces

# Which faces are associated with a connective tissue disease?





# Which faces are associated with a connective tissue disease?





# Rosacea: The Many Faces



# Rosacea

- Most frequently in fair-skinned individuals
- Women > men
- Dysfunction of innate immune system →  
Chronic inflammation, vascular hyperreactivity
- Debatable: demodex mites, bacteria
- UV radiation → ↑ reactive oxidative species
- \*\*Lacks comedones (distinguish from acne)\*\*

# What should you NOT prescribe topically for rosacea?

1. Clindamycin
2. Hydrocortisone
3. Metronidazole
4. Ivermectin

# What should you NOT prescribe topically for rosacea?

1. Clindamycin
2. Hydrocortisone → worsens rosacea
3. Metronidazole
4. Ivermectin

For more severe cases, prescribe doxycycline 100mg bid (anti-inflammatory properties)

# Another facial rash...









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# Perioral (orificial) Dermatitis

- Multiple small erythematous papules/pustules around the mouth (sparing vermillion border), nose, and/or eyes
- + scaly patches
- NO comedones
- Most common: women, between 16 and 45
- Children common (average age 6)
- Cause?: possible irritant + skin barrier dysfunction



# Perioral dermatitis

- Common: previous topical steroid use
- Can occur with oral, inhaled, or topical steroids
- Initially improves, then flares with continued use
- MUST stop topical steroid
- May have to taper to a less potent topical steroid if severe flare initially

# Perioral dermatitis: Treatment

- Bland, nonocclusive lotions
- Pimecrolimus cream
- Metronidazole cream, erythromycin gel

If severe and/or fails topicals x 1 month:

- Doxycycline
- Erythromycin (under age 9)

Back to connective tissue disease...

# Acute Cutaneous Lupus Erythematosus

- “Butterfly Rash”
- Slightly violaceous hue
- Sharp cutoff (vs. less well-defined rosacea)
- Usually spares nasolabial fold (vs. seborrheic dermatitis)





Discoid Lupus













Courtesy of Jeff Callen, MD



# Dermatomyositis

- Idiopathic inflammatory myopathy and skin eruption
- Proximal muscle weakness
- *Approximately 20% have no myositis*
- Erythematous eruption on the face, joints, periungual, upper back and chest, scalp
- Can be associated with interstitial lung disease, cardiomyopathy, and internal malignancy

















# Dermatomyositis

If suspicious:

- Refer to dermatology; biopsy can rule out other conditions
- Ensure that patient is up to date on age appropriate malignancy screening
- Sun protection
- Derm/Rheum: can prescribe anti-malarials, methotrexate, etc.

# Summary: Face Rashes

- Rosacea, perioral dermatitis: NO TOPICAL STEROIDS
- Lupus: spares nasolabial fold, well-demarcated
- Dermatomyositis: heliotrope rash (eyelids), violaceous
- Psoriasis: well-defined, thick scale
- Seborrheic dermatitis: ill-defined, fine scale,

## Part 2: More Pearls:

1. Not all that is red is cellulitis.
2. The perils of oral steroids for rashes.
3. The perils of topical steroids for rashes.

# Pearl #1

- Not all that is red is cellulitis.



# Case #1



Courtesy of Jeff Callen, MD

# Treatment?

1. Give oral antibiotics
2. Do a wound culture
3. Admit patient for iv antibiotics
4. Elevation and compression
5. Topical steroids
6. Topical steroid + topical antifungal
7. Topical antibiotic ointment (triple antibiotic or bacitracin)

# Treatment?

1. Give oral antibiotics
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# Stasis Dermatitis



Courtesy of Jeff Callen, MD

# Stasis Dermatitis

- 2/2 chronic venous insufficiency
- Venous HTN from dysfunctional venous pump or valves → chronic edema
- Proliferation of small blood vessels in the dermis, extravasation of RBCs into the dermis, inflammation in the skin
- Acute: **Erythema**, warmth, eczema-like rash, acute vesiculation
- Chronic: Sclerosis and ulceration, brawny look



## Early stasis dermatitis



This patient has the earliest sign of stasis dermatitis: erythema, scaling, and slight hyperpigmentation in the medial supramalleolar region.

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## Advanced stasis dermatitis



Increased scaling, peripheral edema, erosions, crusts, and secondary bacterial infection may be seen in subacute stasis dermatitis.

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## Skin changes of chronic venous insufficiency

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Longstanding edema in this patient with chronic venous insufficiency led to moderately advanced pigment changes on the medial and lateral ankles, which extend onto the dorsum of the foot. The left medial ankle displays a healed venous ulcer below the malleolus; the right lateral ankle has a small, active, venous ulcer (arrow).

*Courtesy of Patrick C Alguire, MD.*

## Stasis dermatitis



Advanced stasis dermatitis with hyperpigmentation, lichenification, sclerosis, and ulceration.

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## Chronic stasis dermatitis



This patient with chronic stasis dermatitis presents with hyperpigmentation, lipodermatosclerosis, atrophie blanche, and varicosities.

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# Risk factors

- Age
- Female gender
- Obesity
- Family history
- Standing occupation
- History of DVT
- Aggravating factors: HTN, CHF

# Differential diagnosis

## Asteatotic eczema (eczema craquele)



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The asteatotic skin is dry and slightly scaly, with a characteristic cracked appearance.

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## Lichen simplex chronicus



Areas of thickened and hyperpigmented skin from chronic rubbing on the ankle of a patient with lichen simplex chronicus.

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## Plaque psoriasis



Well demarcated, erythematous, and scaly plaques on the legs of a patient with psoriasis.

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## Tinea corporis



Multiple round, erythematous plaques of variable size, some with signs of central resolution, on the leg of a patient with tinea corporis.

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## Erysipelas of the leg



Erysipelas of the lower leg. The rash is intensely red, sharply demarcated, swollen, and indurated.

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## Necrobiosis lipoidica, early lesions

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Necrobiosis lipoidica diabeticorum. This diabetic patient has early lesions that consist of yellow-red plaques. Epidermal atrophy and telangiectasias tend to occur later.

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## Pretibial myxedema



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The skin is edematous and has a waxy, "orange peel" appearance. A large nodular plaque is visible on the anterior aspect of the ankle.

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# Complications of Stasis Dermatitis

- Contact dermatitis
- Autosensitization
- Superinfection

# Contact Dermatitis

- Much higher risk!!
- Repeated use, increased blood flow to area, chronic inflammation
- Fragrances
- Neomycin (Triple antibiotic oint\*), bacitracin
- Lanolin
- Adhesives
- Anti-itch creams
- Topical steroids (OTC hydrocortisone)



\*Neosporin is the only available brand name triple antibiotic ointment\*

# Autosensitization or “Id” reaction

- Nonspecific rash on arms, thighs, trunk after flare of stasis dermatitis
- Pathogenesis unknown: triggering the immune system elsewhere
- Stasis dermatitis “all over”

# Superinfection

- Most frequently: impetigo
  - Honey crusting
  - Scratching provides opening
- Cellulitis (**bilateral very uncommon**)





# Management

- Compression: start light, be realistic
- Mild bland soaps: Dove, Cetaphil
  - NOT Dial, Zest, or fragranced products
- Vaseline
- Topical steroids: if erythema, pruritus, vesiculation, oozing
  - Ointments preferred over creams
  - Triamcinolone 0.1% ointment briefly

# Underdiagnosis of Stasis Dermatitis

# Misdiagnosis of Cellulitis

- Recent multi-institutional analysis of dermatology consults for cellulitis
- 5% (74) of consultations were for cellulitis in 1 year
- 74% (55) were diagnosed with other conditions (pseudocellulitis) after dermatology evaluation
- No statistically different rate of misdiagnosis across institutions (Mass Gen, UAB, UCLA, UCSF)

# What did the patients have?

- 31% stasis dermatitis
- 14.5% contact dermatitis
- 9% tinea
- Other conditions included: psoriasis, vasculitis, lymphedema
- 38% had more than 1 cutaneous condition



# Predictors

- No significant difference in populations with cellulitis vs. pseudocellulitis
- Leukocytosis only seen in 5% of true cellulitis patients, same as patients with pseudocellulitis
- \*\*Leukocytosis not a predictor of cellulitis\*\*
- Calor, dolor, rubor, tumor: NOT just infection
- Heat, pain, redness, swelling= **inflammation**

# Cellulitis is Expensive

- More \$3.7 billion spent on approximately 24,000 adult patient admissions for cellulitis in 2004
- 74% in previous multi-center studied were incorrectly diagnosed
- Use of a dermatologist more frequently upon admission may decrease costs, hospital duration, and use of unnecessary antibiotics

# Summary

Stasis dermatitis:

- Usually bilateral
- Can be red, hot, painful, and swollen
- Underlying chronic venous insufficiency
- Compression, vaseline, topical steroids if acute
- Avoid triple antibiotic ointment and other topical OTC creams

## Pearl #2

- The perils of oral steroids (or certain ones) for rashes.



# Case #2



Courtesy of Jeff Callen, MD





Courtesy of Jeff Callen, MD

# Flare of Pustular Psoriasis 2/2 Oral Steroids

# Triggers of generalized pustular psoriasis

- Withdrawal from \*\*systemic corticosteroids\*\* (44%)
- Other meds withdrawal (cyclosporine, biologics)
- Infections (16%)
- Pregnancy (17%)



# Systemic symptoms: Pustular Psoriasis

- Fever
- Pain
- Leukocytosis
- Arthritis

## Treatment:

- Cyclosporine, biologics, wet wraps, etc.

# Rhus (Poison Ivy)



Courtesy of Jeff Callen, MD





Courtesy of Jeff Callen, MD

# Allergic Contact Dermatitis

- Avoid short courses of oral steroids or IM triamcinolone
- Methylprednisolone dose pack: too brief
- Patients will flare when they complete pack or shot wears off
- **Instead: prescribe a Prednisone 20 day taper**
- 60mg qam x 5days, 40mg qam x 5days, 20mg qam x 5days, 10mg qam x 5days



- Generalized psoriasis: do not give oral steroids
- Severe rashes (that aren't psoriasis): do not use steroid dose packs or IM triamcinolone
- Prednisone 20 day taper

# Pearl #3

- The perils of topical steroids for rashes.
- #1. Avoid prescriptions creams that mix steroids and an antifungal cream
  - If you don't know what it is, make a guess!! Chose a steroid or an antifungal cream!!
  - **Topical steroids= Food for fungus!!**
- #2. Avoid strong steroids in the skin folds.

# Examples

- Clotrimazole + betamethasone dipropionate cream
  - Weak antifungal + potent topical steroid
- Triamcinolone + nystatin cream
  - mid potency topical steroid + anti-yeast
- \*\*Nystatin does not work for fungus!!\*\*
- Azoles work for both!!

# Clotrimazole/betamethasone used on Tinea= Tinea Incognito



Courtesy of Jeff Callen, MD



# More Tinea Incognito



Courtesy of Jeff Callen, MD

# Clotrimazole/betamethasone striae



Courtesy of Jeff Callen, MD



# Appropriate steroids

- For the folds (groin, axilla, etc):  
hydrocortisone, triamcinolone **0.025%**  
**sparingly;**
- Only time I ever mix a steroid with an antifungal cream:
  - Intertrigo: hydrocortisone 2.5% + ketoconazole cream

# Summary

- Bilateral red lower legs: most likely stasis dermatitis
- Compression, mild soaps, steroid ointments
- Steroid dose packs DO NOT work for rashes
- Do not treat psoriasis with oral steroids
- When in doubt, pick either a steroid or an antifungal cream, never both



Thank you!!