

# Cases in Dermatology

Annual Primary Care Conference

June 5, 2015

Chong Foo, M.D.

PeaceHealth Medical Group, Dermatology

- ▶ I have no conflicts of interest to declare for this presentation

News of the day!



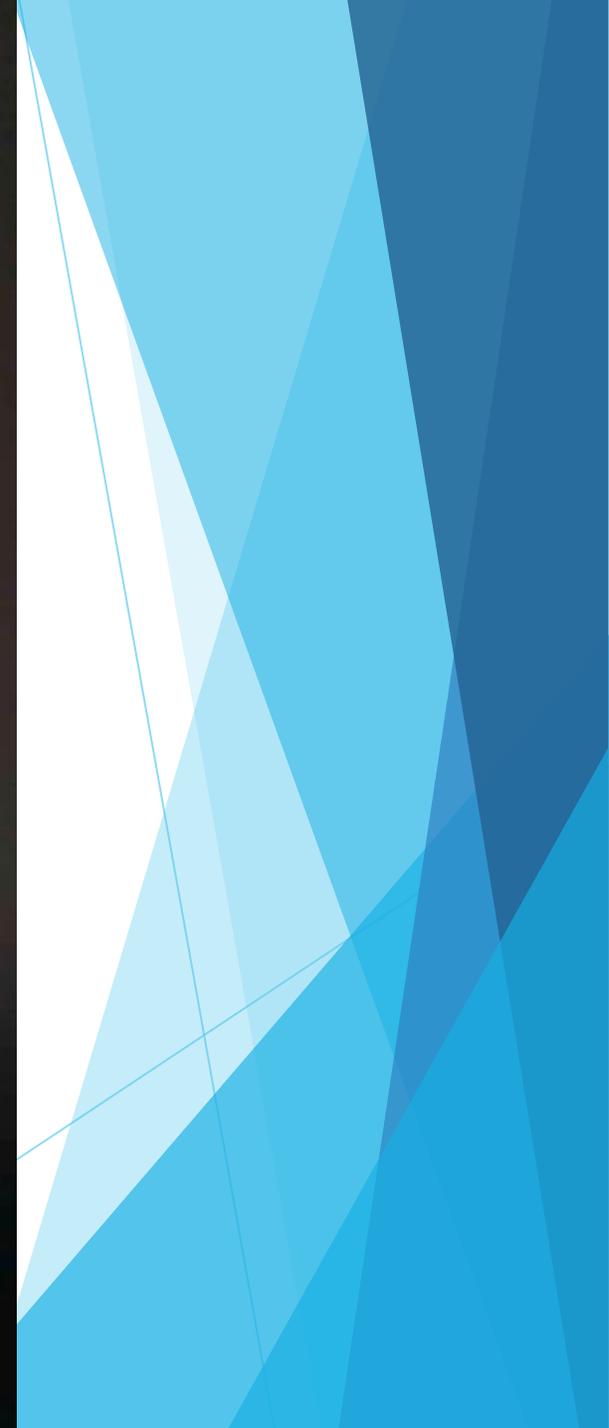
# 12 Cases

- ▶ Clinical diagnosis of common rashes
- ▶ Topical corticosteroids
- ▶ Skin biopsy for rash
- ▶ Drug reactions
- ▶ Pruritus
- ▶ Psychocutaneous disease

# Monday 7.30am

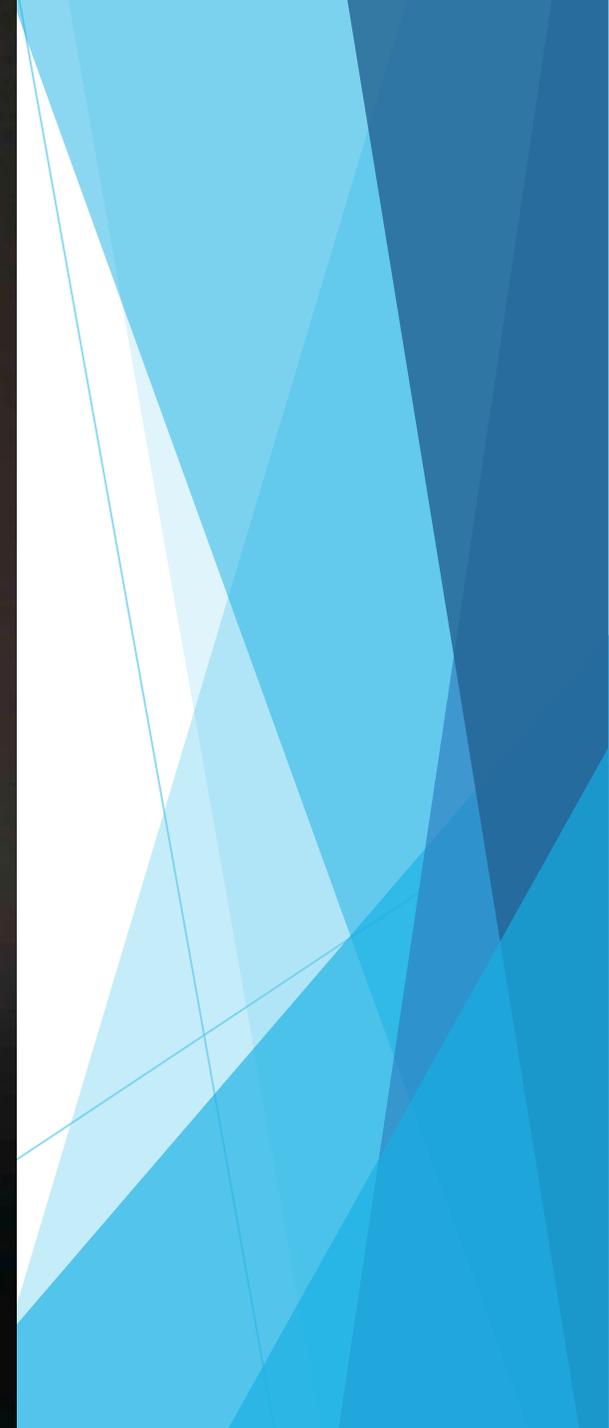
## Case #1

- ▶ “I’ve got a rash”
- ▶ “I’ve had it for years, but I decided to come in today”
- ▶ “Make it go away”
- ▶ “Now..”



# Differentials

- ▶ Drug eruption
- ▶ Tinea corporis
- ▶ Eczema
- ▶ Psoriasis





**B**

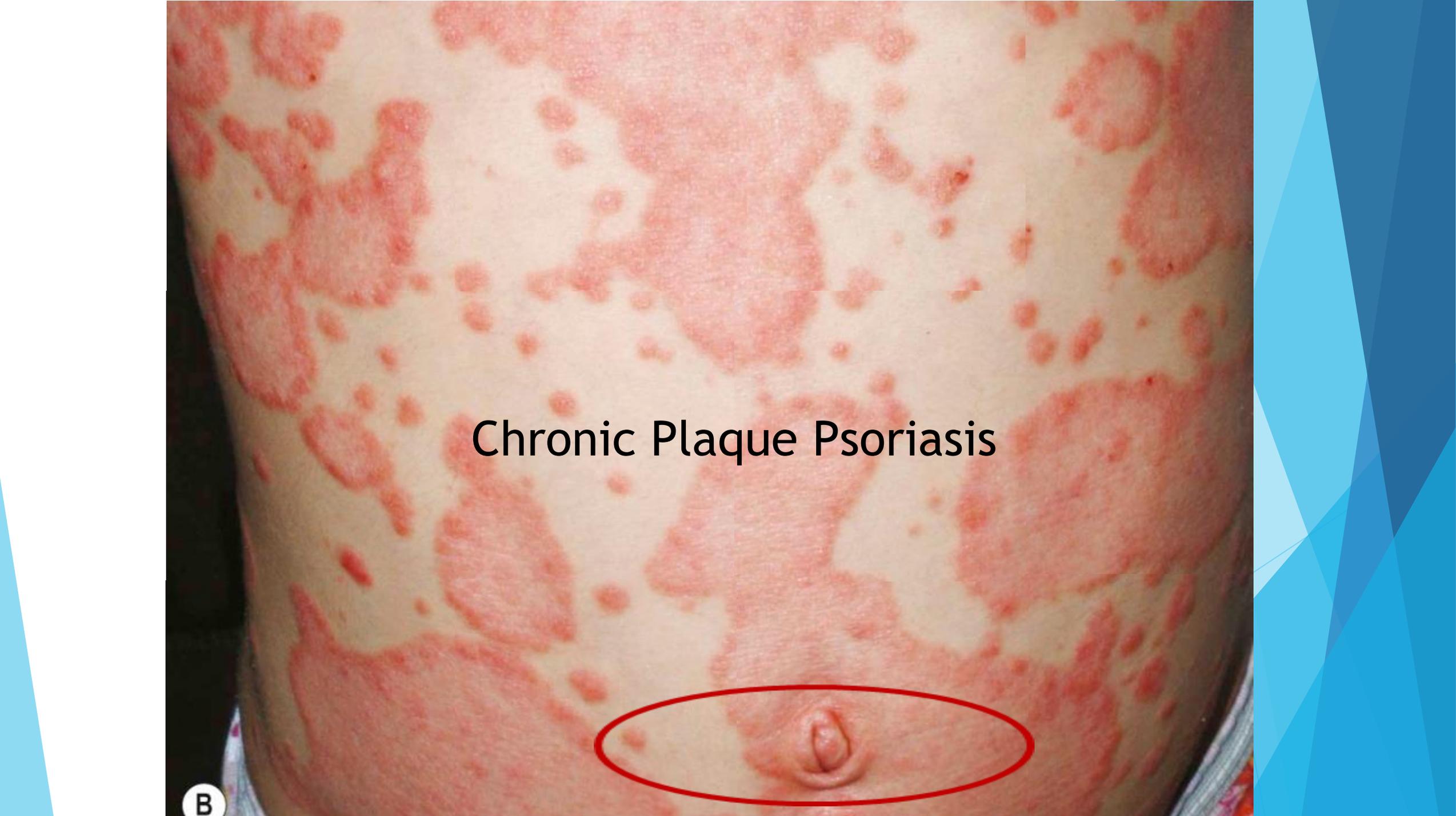
# Diagnosis?

- ▶ Drug eruption
- ▶ Tinea corporis
- ▶ Eczema
- ▶ Psoriasis





- ▶ Well-demarcated erythematous scaly plaques



## Chronic Plaque Psoriasis

# Guttate psoriasis

- ▶ Common in children and young adults
- ▶ >50% have preceding Strep infection
- ▶ May regress in children in months
- ▶ More likely to become chronic in adults
- ▶ Responsive to phototherapy



# Psoriasis Take Home Point

- ▶ Check for recent Streptococcal infection if one sees guttate psoriasis
- ▶ Empiric antibiotics for Streptococcal related guttate psoriasis
  - ▶ Baughman RD. Search for Streptococcus. *Arch Dermatol.* Jan 1992;128(1):103.



# Treatment options

- ▶ Topicals
  - ▶ Corticosteroids
  - ▶ Vitamin D analogues (calcipotriene)
    - ▶ hypercalcemia
- ▶ Phototherapy (PT)
  - ▶ Narrowband UVB
  - ▶ Potential risk of skin cancer
  - ▶ Inform patients on PT about medications that cause photosensitivity



# Treatment options

- ▶ Systemic
  - ▶ Biologics
    - ▶ TNF-alfa inhibitors (etanercept, adalimumab, infliximab)
    - ▶ IL-17 (ustekinumab, secukinumab)
  - ▶ Methotrexate, apremilast, cyclosporine
- ▶ Potential risks related to immunosuppression
  - ▶ Infection
  - ▶ Malignancy

# Monday 7.45am

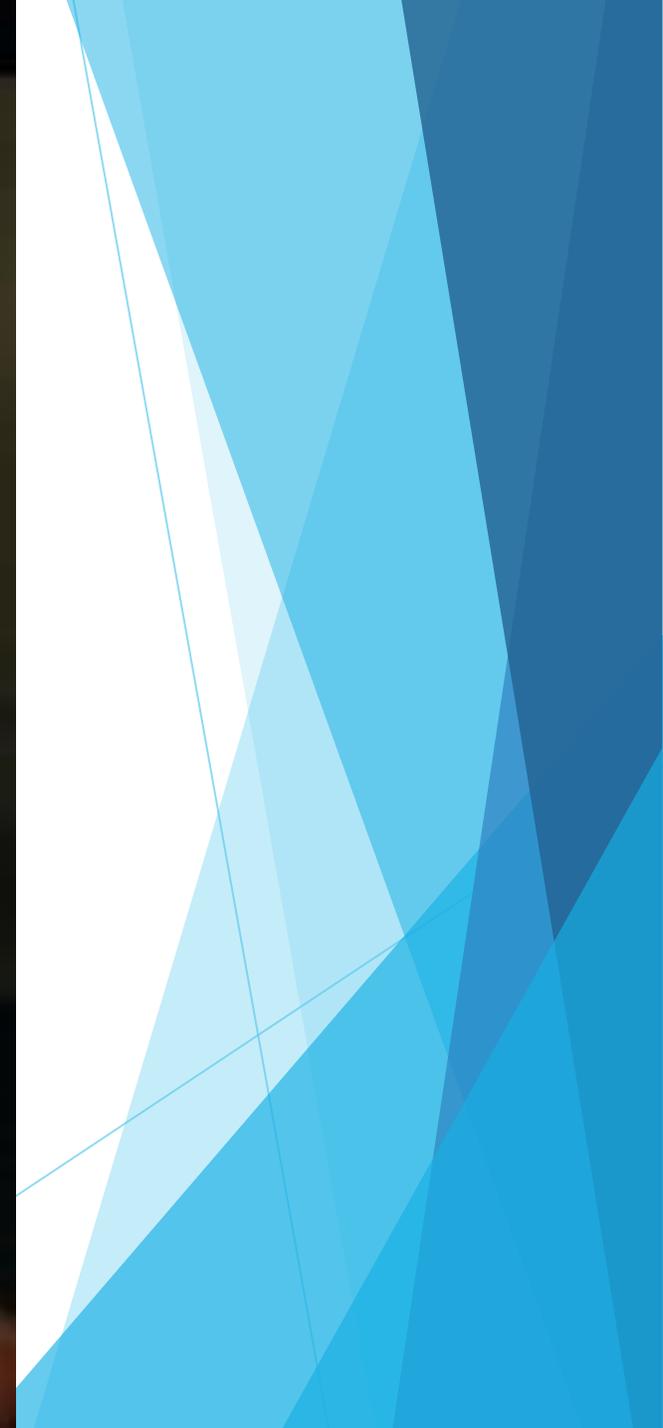
## Case #2

- ▶ “I’ve got a rash”
- ▶ “Make it stop itching”



# Differentials

- ▶ Drug eruption
- ▶ Tinea corporis
- ▶ Eczema
- ▶ Psoriasis





# Diagnosis?

- ▶ Drug eruption
- ▶ Tinea corporis
- ▶ Eczema
- ▶ Psoriasis



- ▶ Nummular dermatitis / nummular eczema





# Treatment

- ▶ Topical corticosteroids
- ▶ Emollients
  - ▶ Ointments > creams > lotions
- ▶ Use fragrance free products
- ▶ Vitamin P (Prednisone) is only for rescue treatment

# Topical corticosteroids

- ▶ 7 classes - Superpotent (class 1) → Low potency (class 7)
- ▶ Superpotent (class 1):
  - ▶ Clobetasol, betamethasone dipropionate ointment
- ▶ High potency (class 2-3):
  - ▶ Betamethasone dipropionate cream, fluocinonide, triamcinolone 0.1% ointment
- ▶ Medium potency (class 4-5):
  - ▶ Triamcinolone 0.1% cream, betamethasone valerate, hydrocortisone butyrate and valerate
- ▶ Low potency (class 6-7) - **face, skin fold, young children:**
  - ▶ Desonide, triamcinolone 0.025%, hydrocortisone 1% or 2.5% cream

# Complications of topical corticosteroids



Cutaneous atrophy

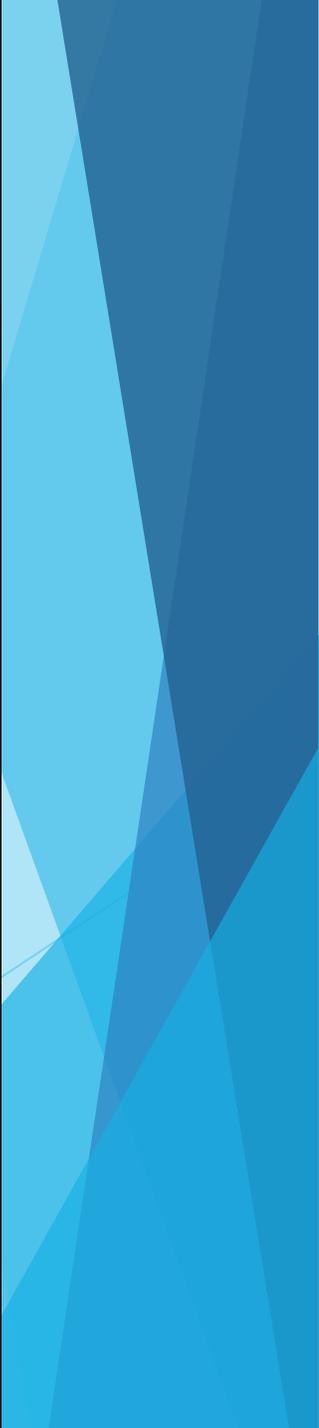
# Complications of topical corticosteroids



Steroid induced acne

# Corticosteroids Take Home Point

- ▶ Avoid potent topical corticosteroid use on face, eyelids and skin fold areas
- ▶ Avoid potent topical corticosteroid use in infants and young children

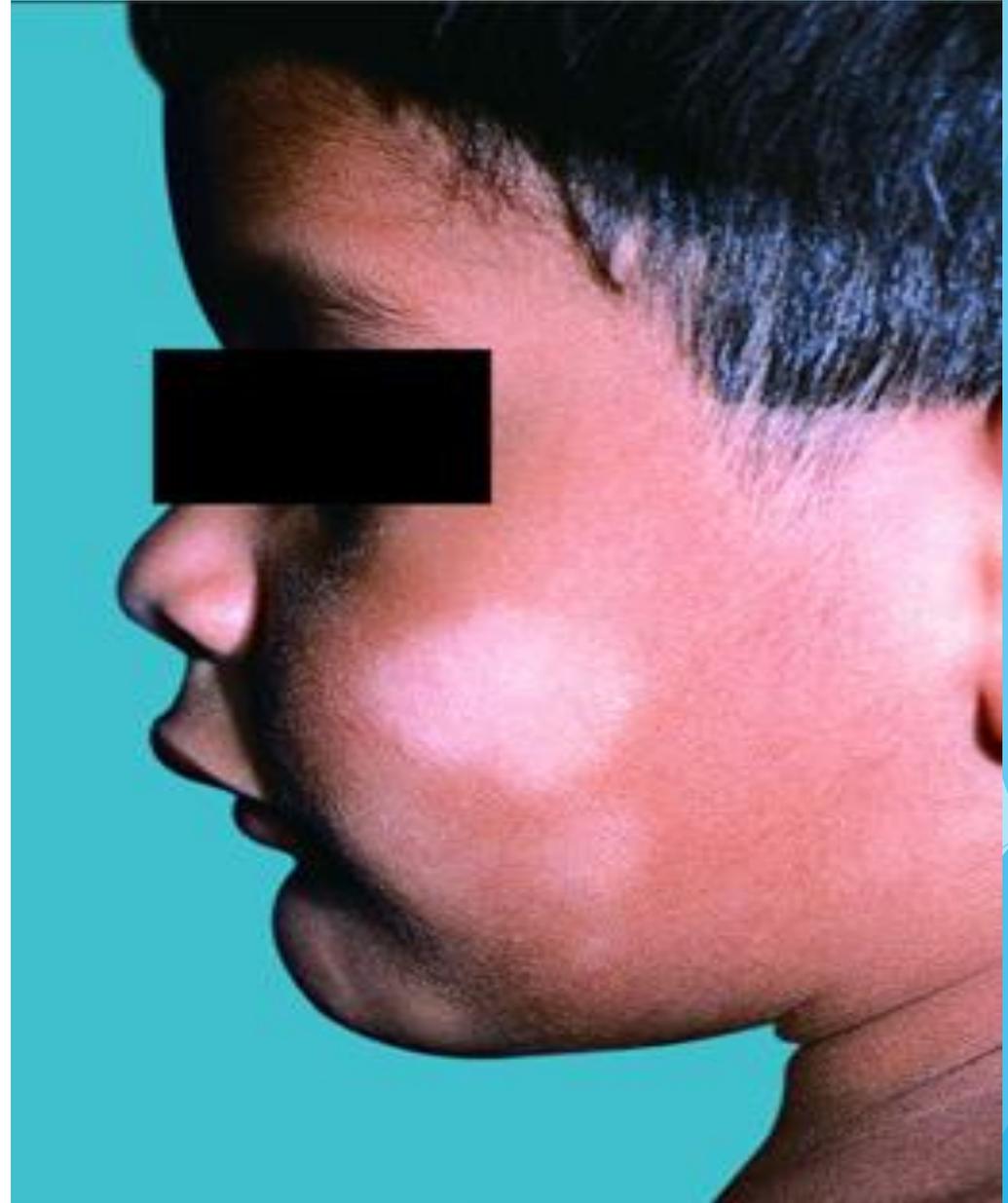


# Atopic Dermatitis





Keratosis Pilaris



Pityriasis alba

# Treatment for atopic dermatitis

- ▶ Topical corticosteroids
- ▶ Emollients
  - ▶ Ointments > creams > lotions
- ▶ Use fragrance free products
- ▶ Vitamin P (Prednisone) is only for rescue treatment

# Topical calcineurin inhibitors

- ▶ Tacrolimus
  - ▶ For moderate to severe atopic dermatitis
- ▶ Pimecrolimus
  - ▶ For mild to moderate atopic dermatitis
- ▶ FDA warning: Cancer risk
- ▶ Do not use in children younger than 2 years

# Complications of atopic dermatitis



Impetigo



Eczema herpeticum

# Stasis Dermatitis



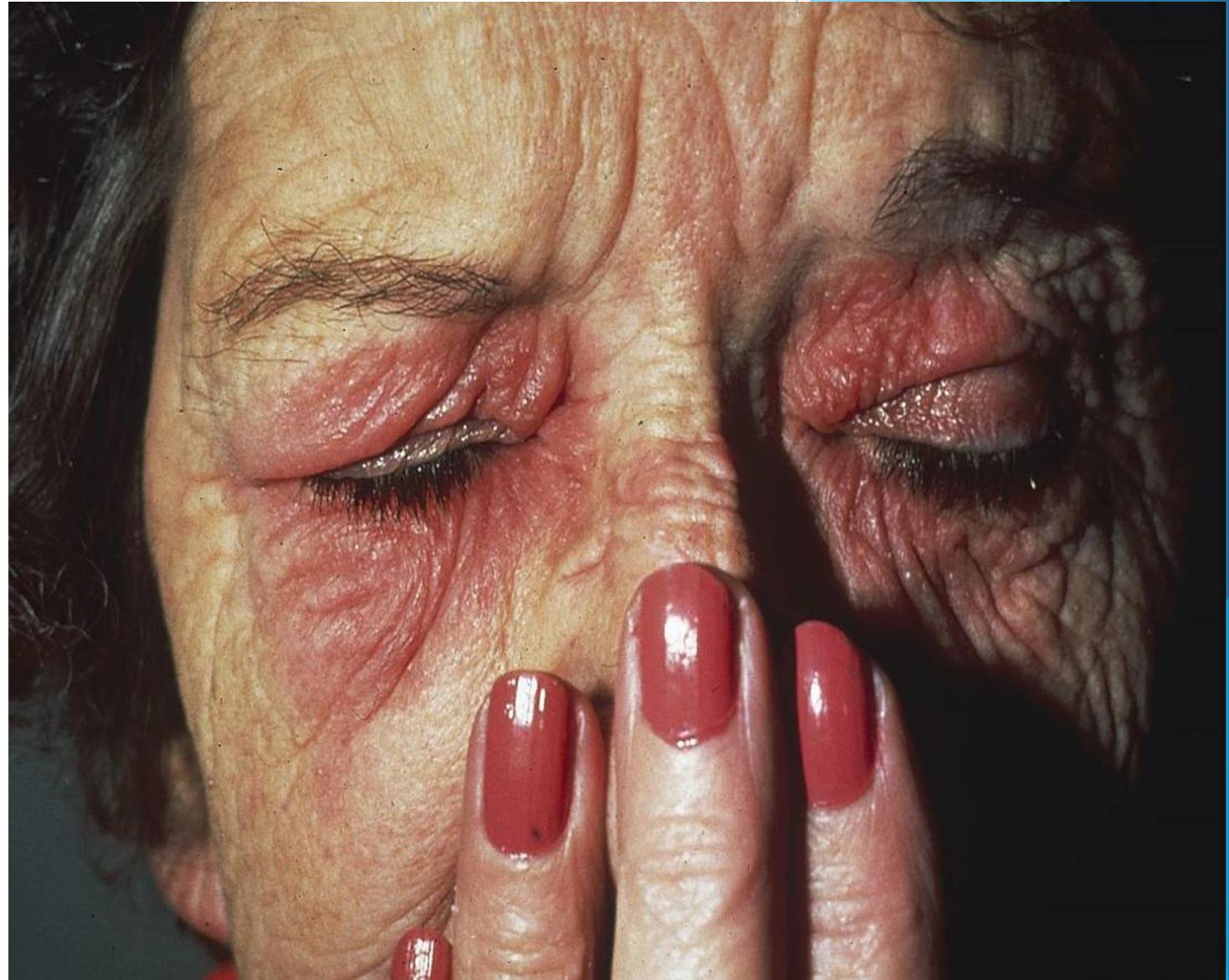
# Treatment

- ▶ Topical corticosteroids
  - ▶ Medium to Super Potent topical steroids
- ▶ Emollients
- ▶ **External compression / Leg elevation**
- ▶ Diuretics
- ▶ Vitamin P (Prednisone) for rescue

# Monday 8.00am

## Case #3

- ▶ “ I’ve got a rash”
- ▶ “I’m not sure what happened”
- ▶ “I got my shingles vaccine last week, and I bet that’s the reason”
- ▶ She starts crying because the rash is so bad



# Differentials

- ▶ Atopic dermatitis
- ▶ Contact dermatitis
- ▶ Dermatomyositis
- ▶ Reaction to zoster vaccination
- ▶ Too much crying



# Contact dermatitis

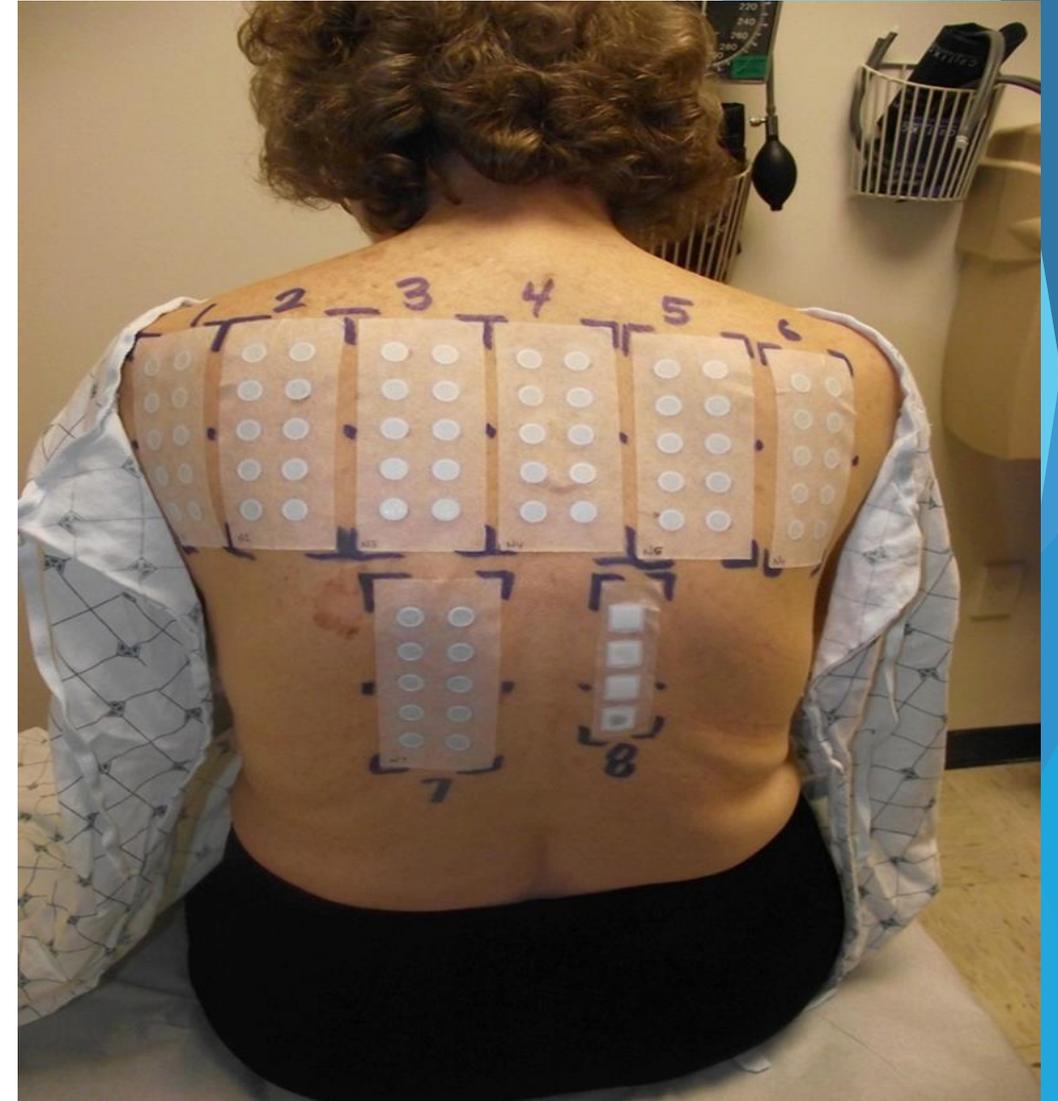
- ▶ Tedious history
  - ▶ Her grand-daughter started doing her nails about 1-2 months ago
- ▶ Delayed type IV hypersensitivity reaction
- ▶ Weeks to months to years of exposure



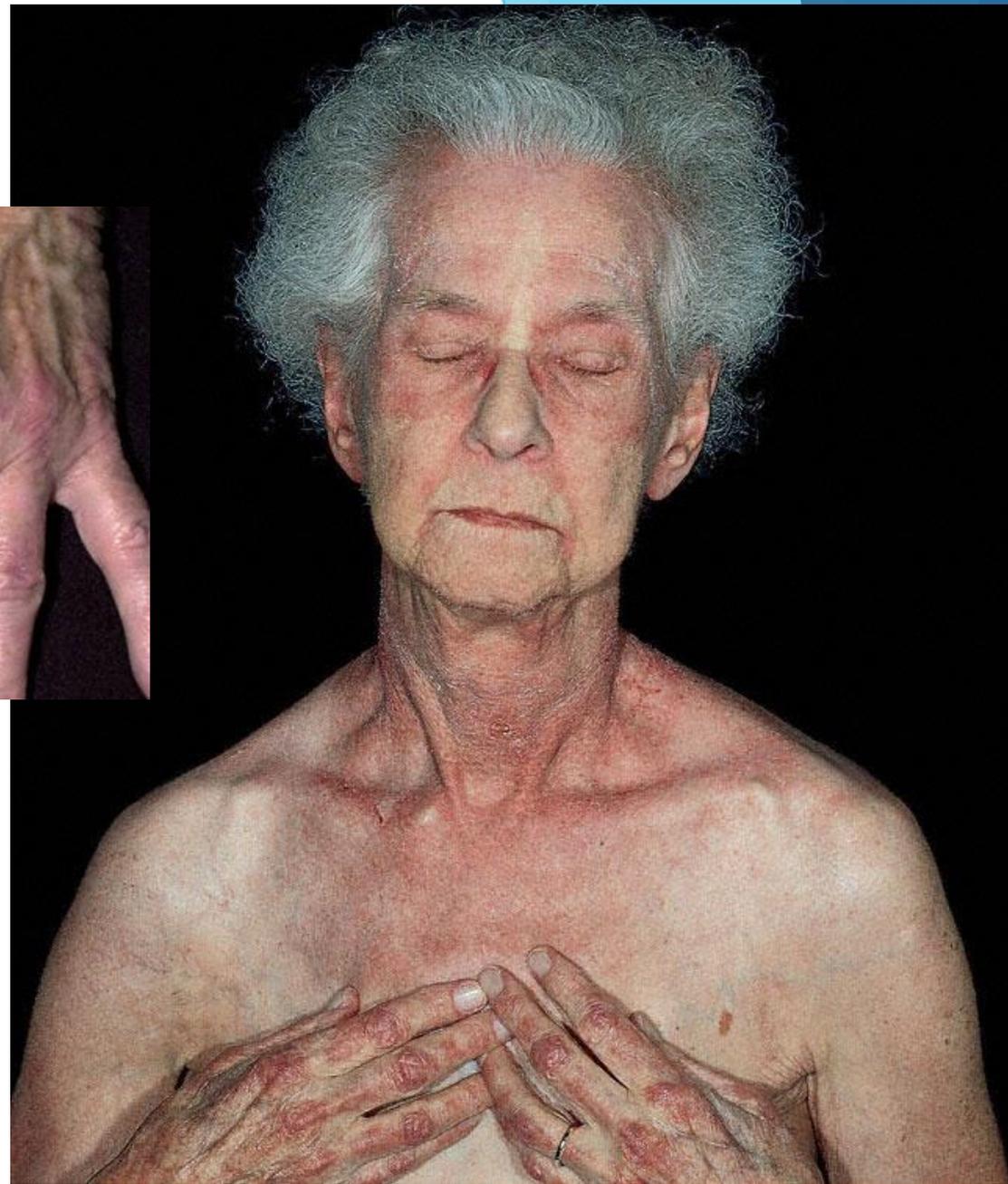


# Diagnosis of contact dermatitis

- ▶ History for potential contact allergen
- ▶ Patch testing (not skin prick tests)
- ▶ Avoidance of allergen



# Dermatomyositis



# Dermatomyositis associations

- ▶ Interstitial lung disease
- ▶ Cardiac conduction defects
- ▶ Malignancy, especially genitourinary and colon cancer
- ▶ Overlap with rheumatoid arthritis, systemic lupus and scleroderma

# Dermatomyositis Take Home Point

- ▶ Eyelid and hand rashes are common, and dermatomyositis is uncommon
- ▶ Cutaneous signs of dermatomyositis are subtle
- ▶ One would only see cutaneous signs of dermatomyositis if one thinks of or looks for it

# Monday 8.15am

## Case #4

- ▶ College student
- ▶ Very healthy
- ▶ “I’ve got a new rash”
- ▶ “I’ve got a new girlfriend and I think I got it from her”



# Differentials

- ▶ Scabies!
- ▶ Scabies!
- ▶ Scabies!

# Diagnosis?

- ▶ Pityriasis rosea
- ▶ Self-limited (usually 6 to 8 weeks)
- ▶ Seen primarily in adolescents and young adults, favoring the trunk and proximal extremities
- ▶ Needs follow up if persists beyond 3 to 4 months



# Tinea versicolor



# Spaghetti and meatballs

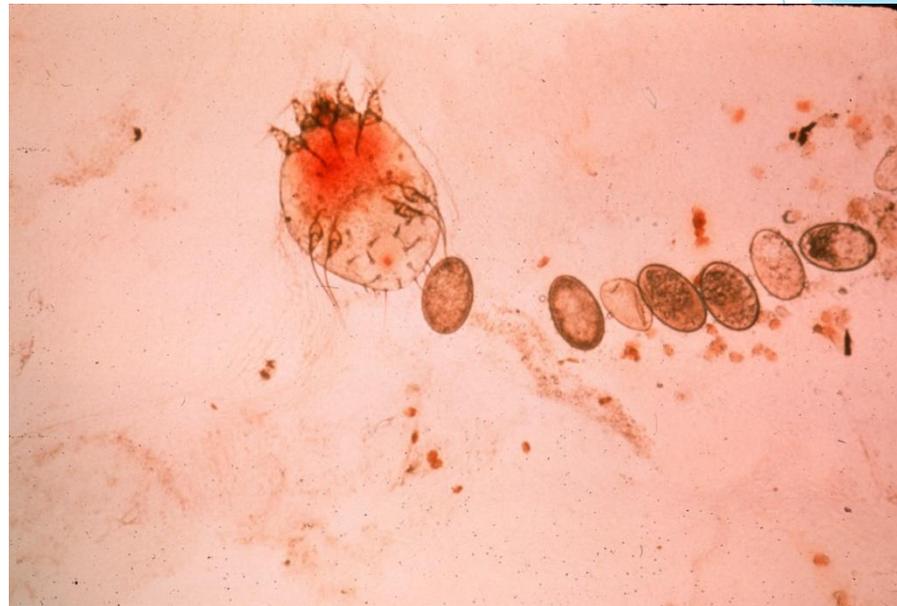


# Oral ketoconazole Take Home Point

- ▶ FDA warning issued in 2013 regarding potentially fatal liver injury requiring transplantation
  - ▶ Adrenal insufficiency and drug interactions
- ▶ Limit use to patients who do not have option of taking alternative antifungals

# Scabies





# Scabies treatment

- ▶ Permethrin 5% cream
  - ▶ Applied overnight to entire body surface
  - ▶ Head to toe for infants and elderly
  - ▶ Can be used during pregnancy (2 hours)
  - ▶ Repeat in a week
- ▶ Wash all clothes, linens and towels used in the past week with hot water and dried in high heat
  - ▶ Store in bag for 10 days
- ▶ Asymptomatic mite carriers
  - ▶ Household and close contacts should be treated even if asymptomatic
  - ▶ Pets do not have to be treated

# Scabies treatment

- ▶ Ivermectin (200 to 400mcg/kg) 2 doses, 2 weeks apart (off label use)
  - ▶ Blocks glutamate and GABA neurotransmission causing paralysis in ectoparasites
  - ▶ Affects peripheral motor function in insects
- ▶ Blood brain barrier in humans protects against neurotoxicity in CNS
- ▶ Inadequate blood brain barrier in fetuses and early infancy
- ▶ Avoid in early infancy (<15kg), pregnant women and breastfeeding mothers

# Scabies Take Home Point

- ▶ Remind patients that rash and pruritus from can last for 2 to 4 weeks after successful treatment

# Skin biopsy for rash

- ▶ Case 1: Psoriasis - psoriasiform or spongiotic dermatitis
- ▶ Case 2: Nummular dermatitis / Atopic dermatitis / Stasis dermatitis - psoriasiform or spongiotic dermatitis
- ▶ Case 3: Contact dermatitis - spongiotic dermatitis
- ▶ Case 4: Pityriasis rosea / scabies - spongiotic dermatitis
- ▶ A skin biopsy, in the last 4 cases, would have shown the similar pathologic findings under the microscope.

# Skin biopsy for rash

- ▶ A dermatopathologist will report the pattern of inflammation seen
  - ▶ Spongiotic, psoriasiform, interface, granulomatous, lichenoid etc
- ▶ The clinician decides whether the pathologic findings support the clinical diagnosis
- ▶ The location, type and chronicity of a lesion where a skin biopsy is taken from, will greatly affect and determine the pattern of inflammation

# Skin biopsy take home point

- ▶ “If you send me a piece of skin, I’ll tell you it’s skin”
- ▶ “If you send me a piece of a rash, I’ll tell you it’s a rash”
- ▶ “If you tell me what you’re looking for, I’ll tell you what if it fits”
- ▶ “If you don’t know what the rash is (when you can see all of a person’s skin), please don’t expect me to give you an answer from a tiny piece of skin”
- ▶ Do not depend on a skin biopsy to provide a diagnosis for your patient’s rash
- ▶ A skin biopsy should be performed only if one can correlate the pathologic findings with clinical findings to reach a diagnosis

# Skin biopsy take home point

- ▶ If referring a patient for a rash, please allow the dermatologist to decide if a biopsy is helpful, and which lesion to take a sample of
- ▶ Taking a skin biopsy prior to a referral often leads to confusion, inaccurate diagnosis, unrealistic patient expectations, a difficult and unhappy consultation, and a repeat skin biopsy



# Monday 8.30am

## Case #5

- ▶ “I’ve got a rash”
- ▶ 40 year old man
- ▶ Had a fever 5 days ago, that has resolved
- ▶ The rash showed up 3 days ago
- ▶ Otherwise healthy and well
- ▶ Same rash occurred perhaps twice in the past, same spot, also after a fever



# Differentials

- ▶ Burn
- ▶ Bite
- ▶ Self-inflicted
- ▶ Infectious?



# More history

- ▶ He really feels fine
- ▶ He took ibuprofen over-the-counter for his fever
- ▶ He would take ibuprofen only when he had fevers in the past, and the fever always went away within 1-2 days, and he loves ibuprofen
- ▶ “Ibuprofen is a wonderful medication”

# Diagnosis?

- ▶ Fixed drug eruption
- ▶ Adverse drug reaction characterized by the formation of a solitary erythematous patch or plaque that will recur at the same site with re-exposure to the drug
- ▶ Onset within 1-2 days of drug exposure
- ▶ Commonly involved drugs include:
  - ▶ phenolphthalein (laxatives), tetracyclines, sulfonamides, NSAIDs, salicylates



# Fixed Drug Eruption



To acetaminophen



To doxycycline

# Exanthematous or morbilliform drug eruptions (“maculopapular rash”)



# Morbilliform drug eruption

- Onset within a week to 10 days
- Resolves in a few days to 2 weeks after the medication is stopped
- Resolves without sequelae (though extensive dryness, scaling and desquamation can occur)
- Treatment consists of topical steroids, oral antihistamines, and reassurance

# Drug-Induced Hypersensitivity Syndrome

- AKA Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS)
- Morbilliform eruption
- Facial swelling, fever, malaise, lymphadenopathy, and other organs (liver, kidneys) involved, eosinophilia
- Onset 3 weeks or more after medication
- 10% mortality rate

# Medications commonly implicated

- ▶ Allopurinol
- ▶ Sulfonamide
- ▶ Anti-convulsants
- ▶ Dapsone
- ▶ Isoniazid
- ▶ NSAIDs
- ▶ Anti-HIV drugs

# Acute Generalized Exanthematous Pustulosis

- ▶ Beta-lactam antibiotics, calcium channel blockers



# Stevens-Johnson Syndrome / Toxic epidermal necrolysis



# Stevens-Johnson syndrome / Toxic epidermal necrolysis

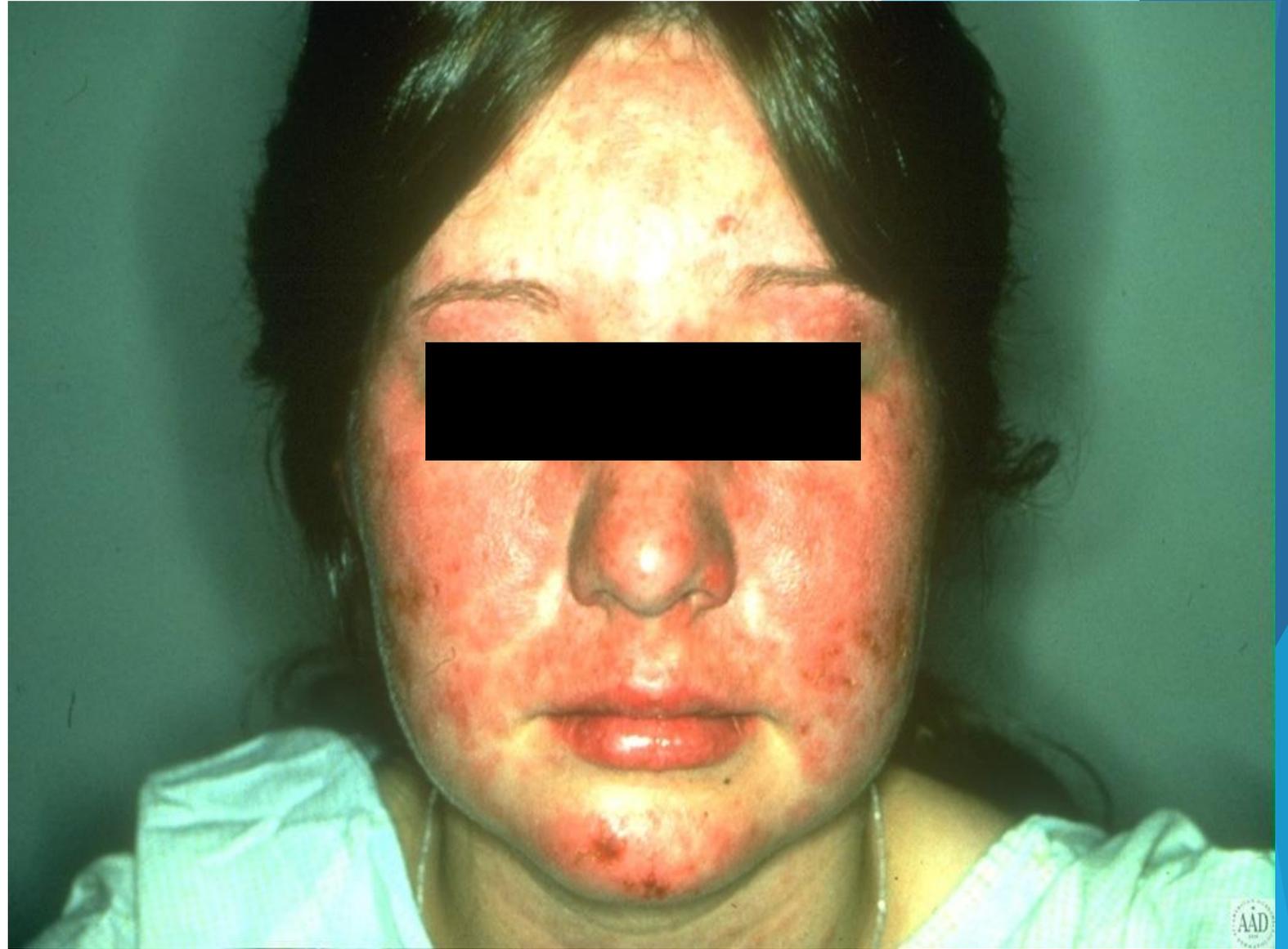
- Acute life-threatening mucocutaneous reaction
- Characterized by extensive necrosis and detachment of the epidermis and mucosal surfaces
- SJS can rapidly progress to TEN
- Early treatment with intravenous immunoglobulin
- Best managed in tertiary center with burns unit for specialized care



# Monday 8.45am

## Case #6

- ▶ “What’s happening to my face?”



# Differentials

- ▶ Seborrheic dermatitis
- ▶ Atopic dermatitis
- ▶ Lupus
- ▶ Allergic contact dermatitis
- ▶ Rosacea
- ▶ Self-inflicted



# Diagnosis

- ▶ Seborrheic dermatitis
- ▶ Atopic dermatitis
- ▶ Lupus
- ▶ Allergic contact dermatitis
- ▶ Rosacea
- ▶ Self-inflicted



# Malar rash of systemic lupus erythematosus



# Discoid lupus

Violaceous atrophic plaques  
Discoid Lupus scars if untreated



# Subacute Cutaneous Lupus



- ▶ Resemble psoriasis, dermatitis, or tinea corporis
- ▶ Sun-exposed skin

# Tumid lupus erythematosus

- ▶ Resemble granuloma annulare, sarcoidosis or urticaria



# Lupus panniculitis



# More cutaneous lupus



- ▶ Lupus chilblains
- ▶ Resemble pernio, but ANA positive



- ▶ Neonatal lupus
- ▶ Mom anti-Ro positive
- ▶ 50% 3<sup>rd</sup> degree heart block

# Cutaneous Lupus Take Home Point

- ▶ There are different types of cutaneous lupus, which often have no systemic involvement
- ▶ Subacute cutaneous lupus is often ANA negative
- ▶ Subacute cutaneous lupus is more often associated with elevated anti-SSA or anti-SSB antibodies
- ▶ Subacute cutaneous lupus can be drug induced (terbinafine, ACE-inhibitors, calcium channel blockers, thiazide diuretics).

# Seborrheic dermatitis



# Treatment

- ▶ Low potency topical corticosteroid
- ▶ Topical ketoconazole
- ▶ OTC zinc pyrithione, selenium sulfide
- ▶ Topical sodium sulfacetamide

# Rosacea

- ▶ Erythema and telangiectasia
- ▶ Erythematous papules and pustules
- ▶ Rhinophyma



# Treatment

- ▶ Topical metronidazole
- ▶ Oral tetracycline (doxycycline, minocycline)
- ▶ Topical Azelaic acid
- ▶ Topical ivermectin
- ▶ Vascular laser

# Contact dermatitis

- ▶ Eyelids and lips tend to be involved first
- ▶ With progression, diffuse erythema over the face, extending down to the anterior neck



# Monday 9.00am

## Case #7

- ▶ Painful sores on the legs



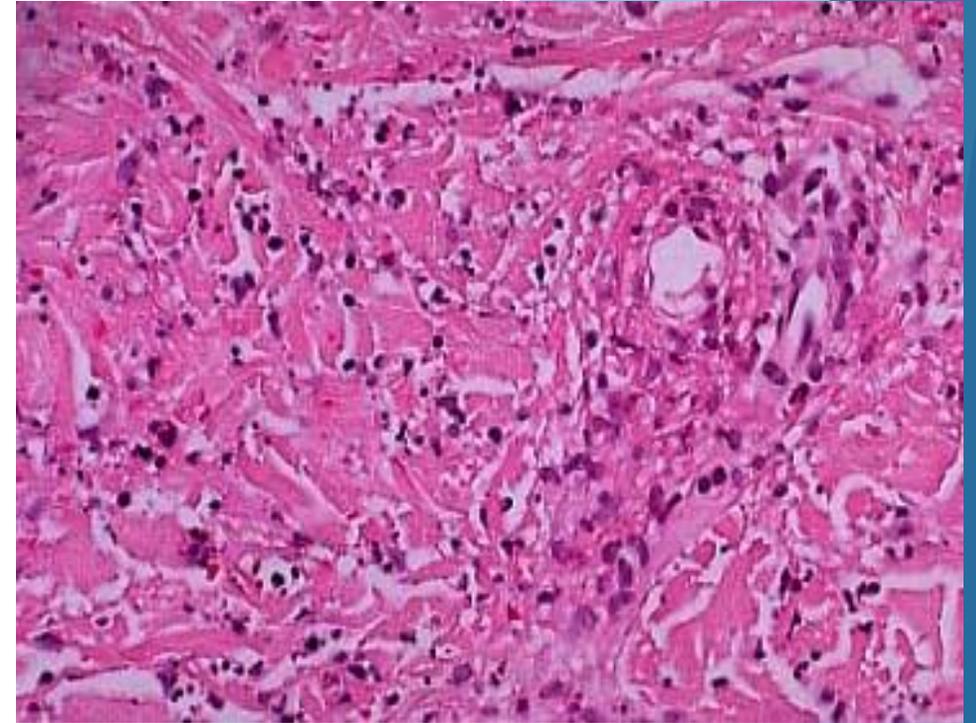
# Diagnosis?

- ▶ Palpable purpura = vasculitis



# Diagnosis?

- ▶ Palpable purpura = vasculitis
- ▶ Confirm on skin biopsy = leucocytoclastic vasculitis
  - ▶ Biopsy an early lesion
- ▶ Etiology?
  - ▶ Primary cutaneous
  - ▶ Secondary (drug reaction, endocarditis, viral hepatitis etc)
  - ▶ Autoimmune (SLE, RA, ANCA vasculitidis, Henoch Schonlein, cryoglobulin, etc)
  - ▶ Paraneoplastic



# Henoch Schonlein Purpura

- ▶ Most commonly seen in children
- ▶ Adult onset HSP associated with increased risk of developing chronic kidney disease
- ▶ Skin biopsy for direct immunofluorescence
  - ▶ IgA, C3 and fibrin deposition



# Monday 9.15am

## Case #8

- ▶ “I am itching all over and it is getting worse”
- ▶ Excoriations



# Generalized Pruritus

- ▶ No underlying rash
- ▶ Work up for underlying systemic disease
  - ▶ CBC, BUN/creatinine, liver function, LDH, TSH, serum protein electrophoresis with immunofixation
  - ▶ Viral hepatitis, HIV, stool ova cyst parasite
- ▶ Consider urticarial
  - ▶ Individual lesions last for minutes to hours
  - ▶ May demonstrate dermatographism



# Skin changes caused by pruritus



Lichen simplex chronicus



Prurigo nodularis

# Treatment

- ▶ Treat underlying systemic disease
- ▶ Topical anesthetics, capsaicin (localized)
- ▶ Topical emollients to reduce dry skin
- ▶ Phototherapy
- ▶ Systemic options include antihistamines, naltrexone, gabapentin



# Delusion of parasitosis

- ▶ Primary psychiatric disorder
- ▶ Experience formication
  - ▶ Something biting, stinging, crawling
- ▶ See or are able to remove fibers in your presence
- ▶ Close contacts come to believe in the delusion as well
- ▶ “What do you think is causing the problem?”

# Delusion of parasitosis

- ▶ These patients think they need a dermatologist
- ▶ They often have seen several dermatologists
- ▶ They need a behavioral health specialist
- ▶ Treatment of choice is / was pimozide
- ▶ Atypical antipsychotic medications are more commonly used

# Neurotic excoriation



# Unexplained scars

## Cigarette burns



# Acne excoriee



# Take Home Point

- ▶ For psychocutaneous diseases
- ▶ Treat underlying depression, anxiety or obsessive-compulsive disorder

# Monday, 9.45am

## Case 10

- ▶ “I have blisters all over my body”



# Diagnosis

- ▶ Bullous Pemphigoid
- ▶ Refer to dermatology (phone call)
- ▶ Immunobullous disease
- ▶ Diagnosis made on skin biopsy for H&E and direct immunofluorescence
- ▶ Immunosuppression
- ▶ Association with malignancy is marginal



# Monday, 10.00am

## Case 11

- ▶ “I’ve got acne”



# Comedones

- ▶ Topical retinoids
  - ▶ Tretinoin
  - ▶ Adapalene
  - ▶ Tazarotene



# Inflammatory

- ▶ Topical anti-inflammatory Rx
  - ▶ Clindamycin, benzoyl peroxide, dapsone, azelaic acid
- ▶ Oral Tetracyclines (avoid in <8 years)
- ▶ Oral contraceptives / Spironolactone for women with menstrual flares
  - ▶ FDA approved for acne: Estrostep, Yaz, Ortho-tricyclen



# Take home point

- ▶ Hyperandrogenism should be suspected in women with acne, hirsutism and irregular menstrual periods
- ▶ Lab work up: DHEA-S, free or total testosterone and 17-hydroxyprogesterone
  - ▶ DHEA-S 4,000-8,000ng/ml or raised 17-OHprogesterone may indicate congenital adrenal hyperplasia
  - ▶ DHEA-S >8,000ng/ml, suspect adrenal tumor
  - ▶ Elevated testosterone may indicate polycystic ovarian syndrome or ovarian tumor

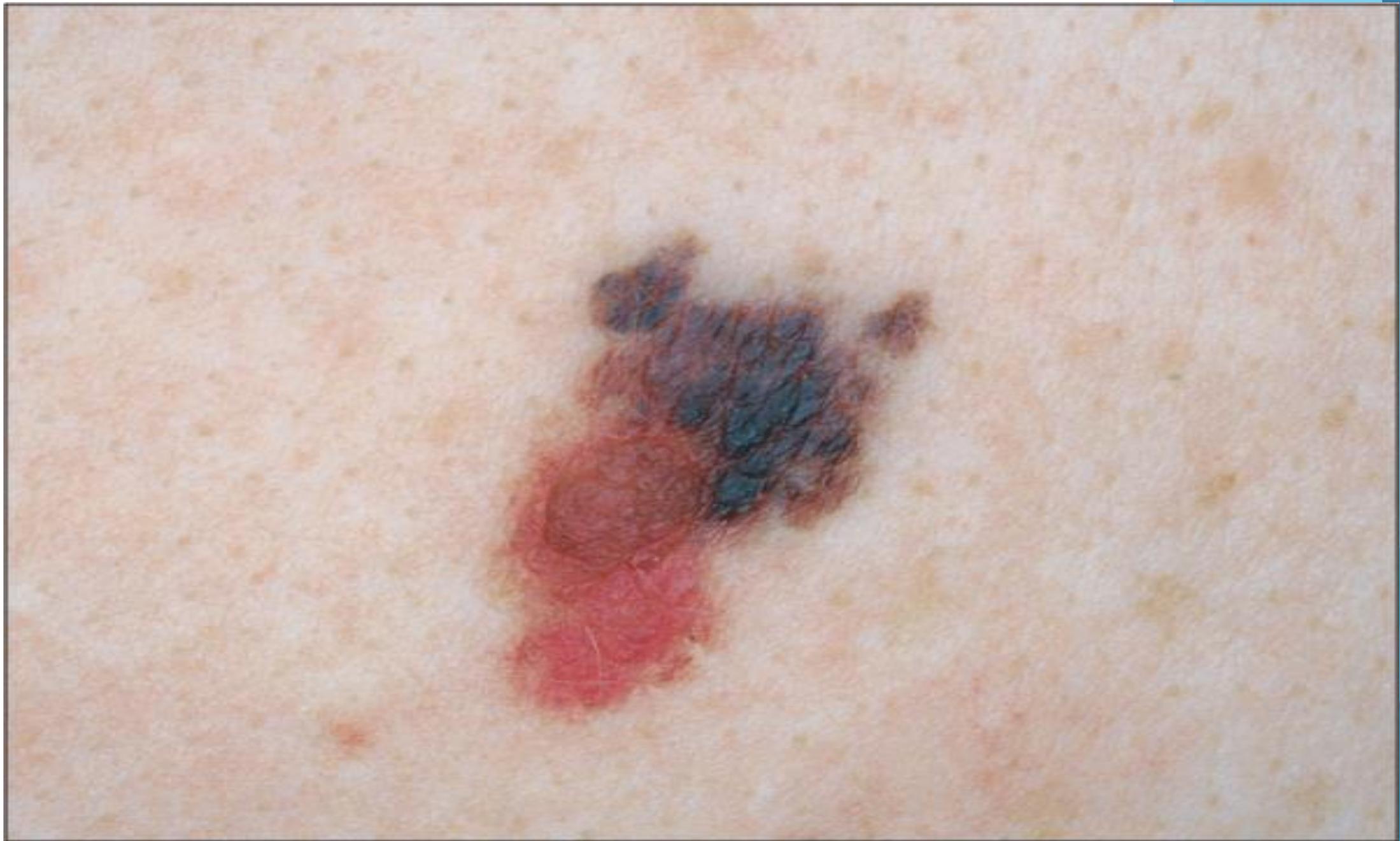
# Nodulocystic

- ▶ Isotretinoin



# Monday, 10.15a, Case 12

- ▶ “I’ve got something growing on my skin”



# Melanoma Take Home Point

- ▶ Always look at the skin during annual exams
- ▶ Especially back and legs
- ▶ Phone call for urgent consults

Monday 10.30am

**That's all, folks!**