Itchy Mystery Rashes

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Disclosures

Consultant
- Grand Rounds
- ToxServices
- UpToDate

Advisory Board
- Dermira
- UCB
- Ferndale

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Objectives

1. Outline visual content clues or patient history elements to distinguish between forms of dermatitis in order to identify patients would benefit from patch testing
2. Provide diagnostic strategies to aid in distinguishing various forms of eczematous dermatitis

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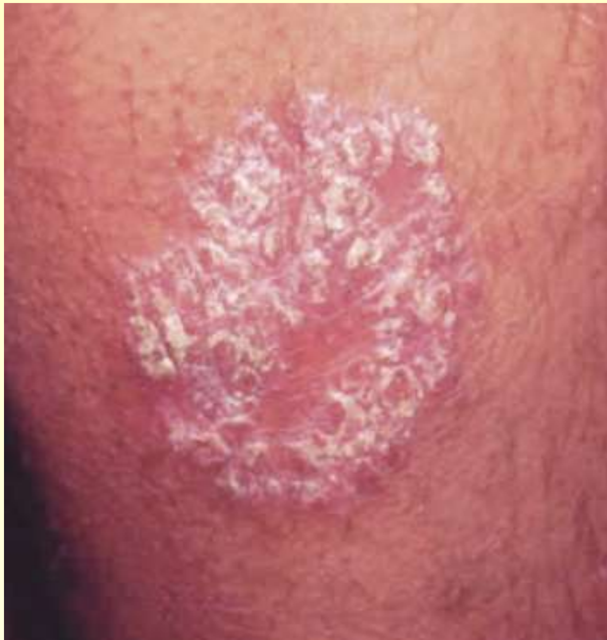
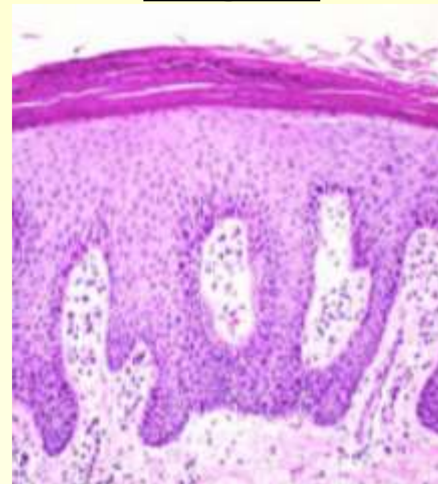
Two forms of Dermatitis

<u>Papulosquamous</u>

Skin barrier not broken



<u>Psoriasiform dermatitis (elongated rete ridges)</u>



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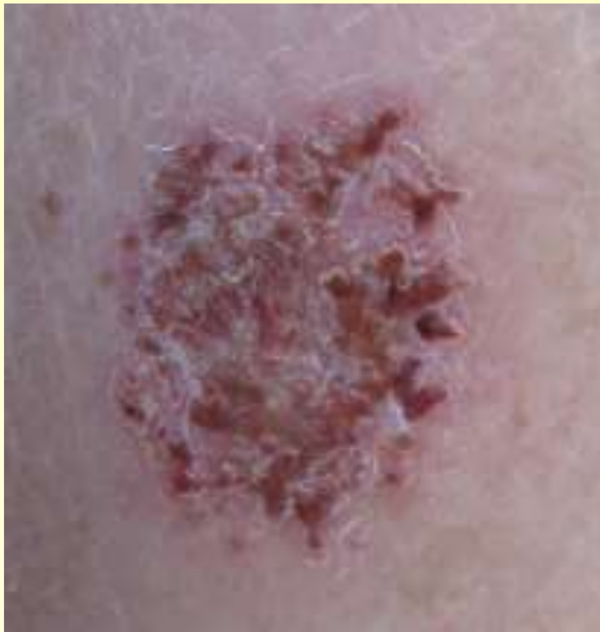
https://classconnection.s3.amazonaws.com/761/flashcards/3661761/png/screen_shot_2014-02-19_at_21304_pm-1444B90F5BA43D2115A.png

Two forms of Dermatitis

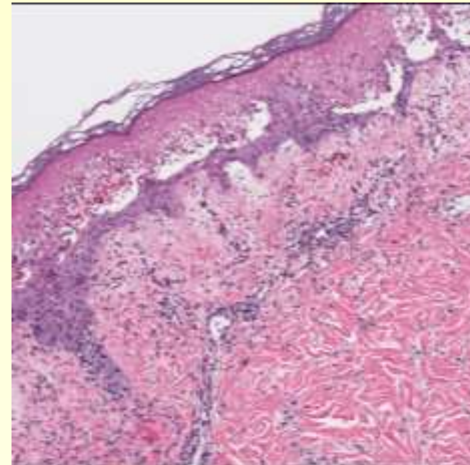
Eczematous

Skin barrier is compromised



Spongiotic dermatitis

(with eosinophils)



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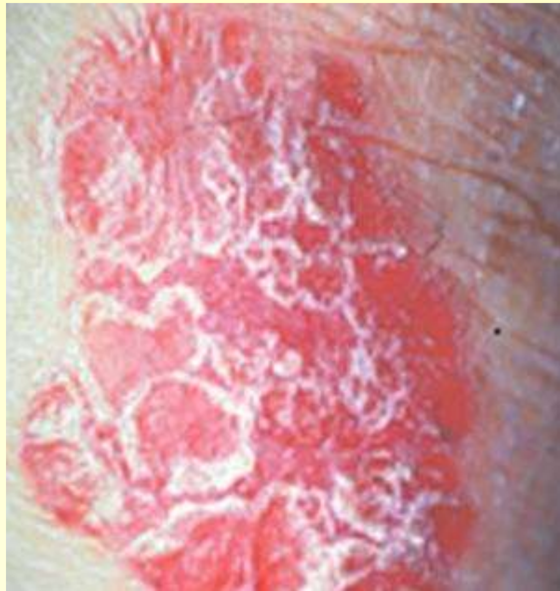
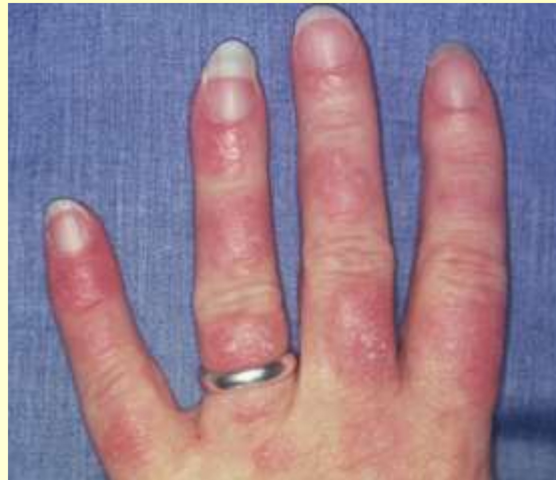
Papulosquamous Dermatitis

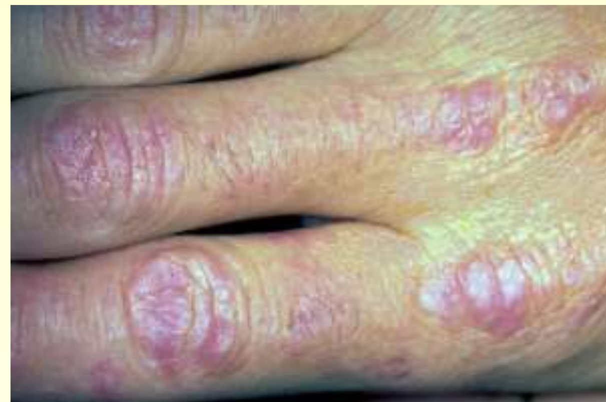
Psoriasis



http://www.skinrashespictures.com/images/red-skin-psoriasis.jpg

Connective tissue disease





http://img.medscape.com/pi/emed/ckb/rheumatology/329097-332244-5271.jpg

http://www.lib.uiowa.edu/hardin%5Cmd/pictures22/dermnet/dermatomyositis61.jpg

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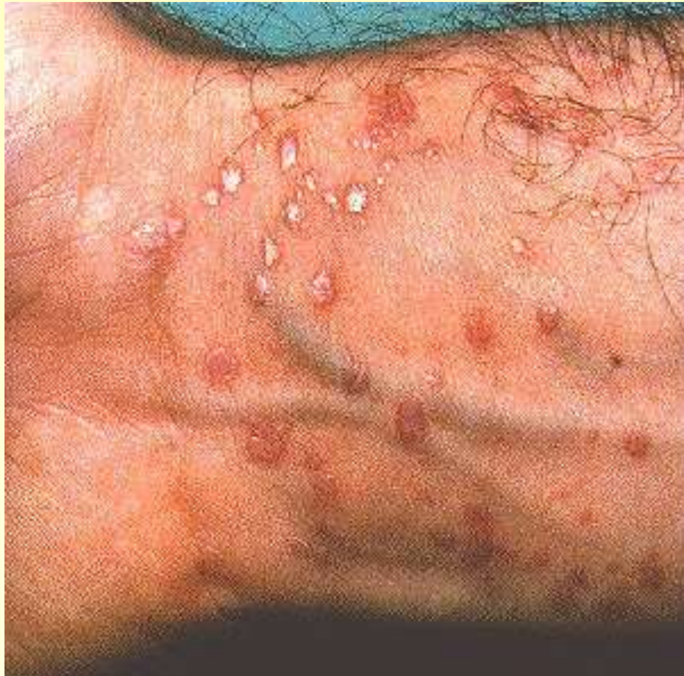
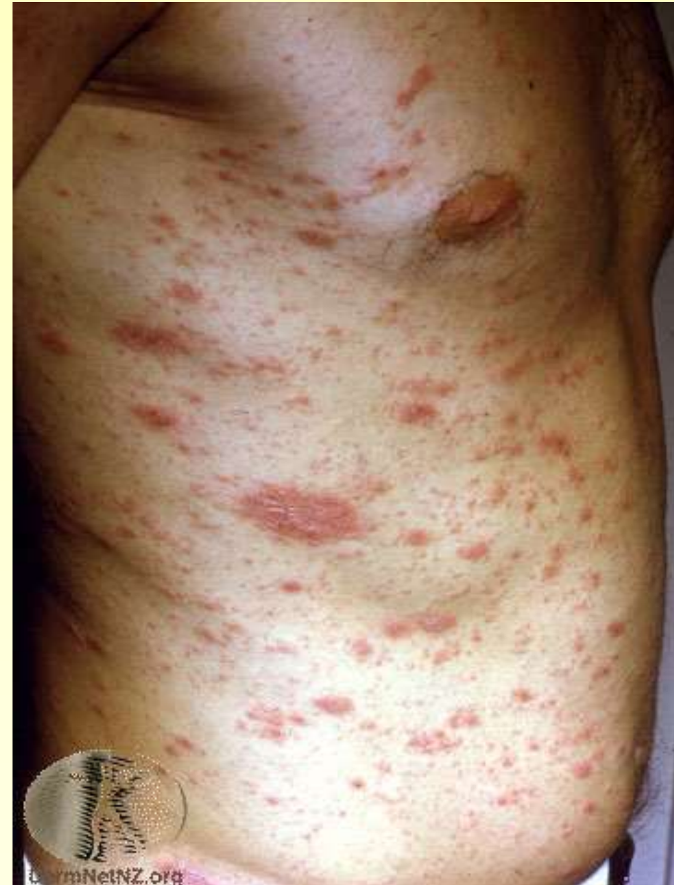
Papulosquamous Dermatitis

Lichen planus



http://www.patient.co.uk/images/DIS67.jpg

Pityriasis rosea



http://www.dermnet.org.nz/doctors/viral-infections/images/pitrosea1.jpg

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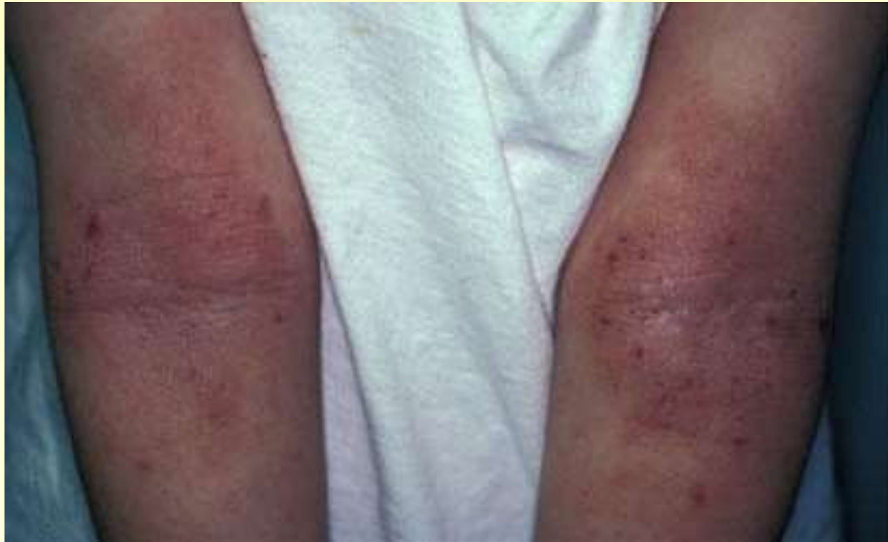
Eczematous Dermatitis

Atopic dermatitis

Seborrheic dermatitis



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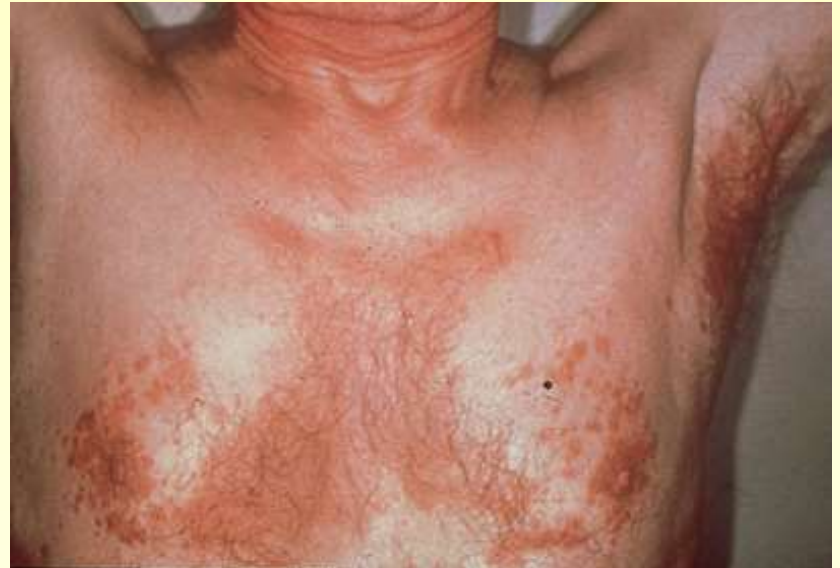

http://library.med.utah.edu/kw/derm/mml/22320087.jpg

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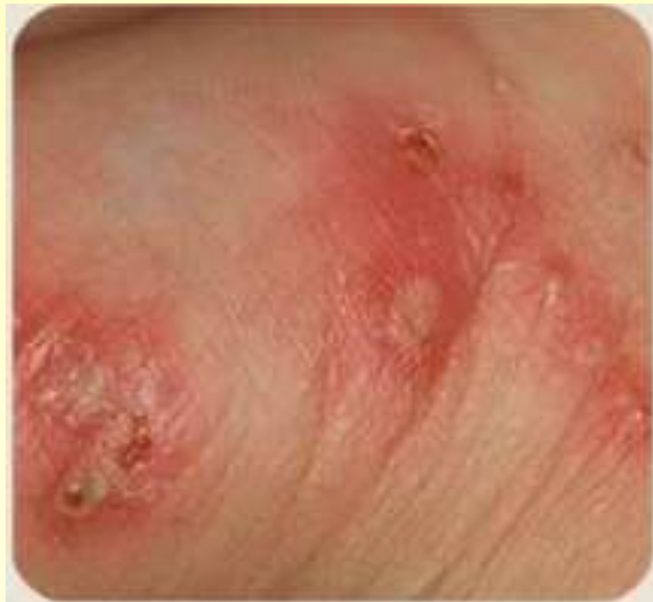
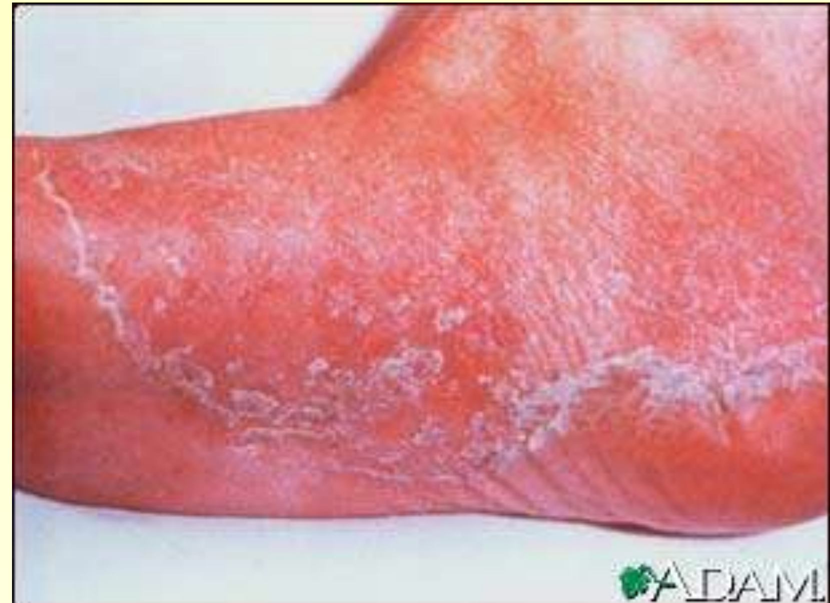
Eczematous Dermatitis

Scabies

Tinea





http://www.stanford.edu/class/humbio103/ParaSites2004/Scabies/scabies1.jpg

http://medicalimages.allrefer.com/large/athletes-foot-tinea-pedis.jpg

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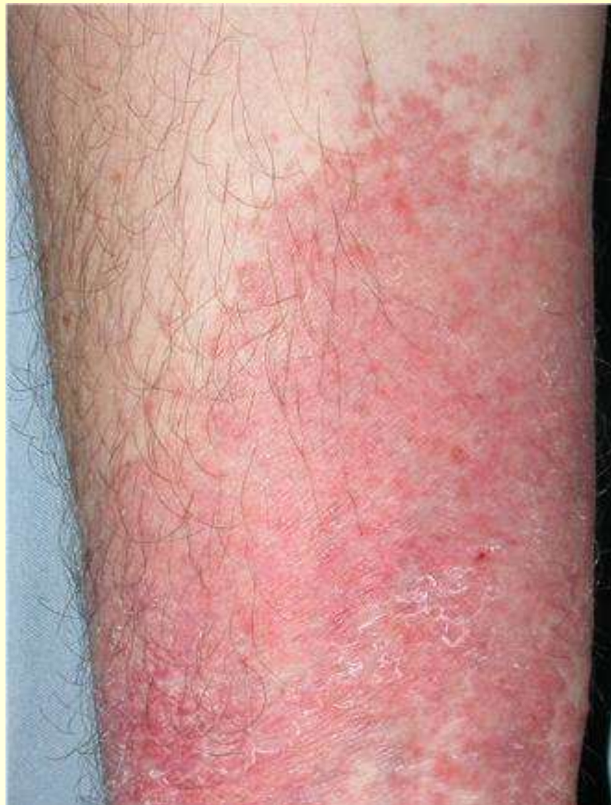
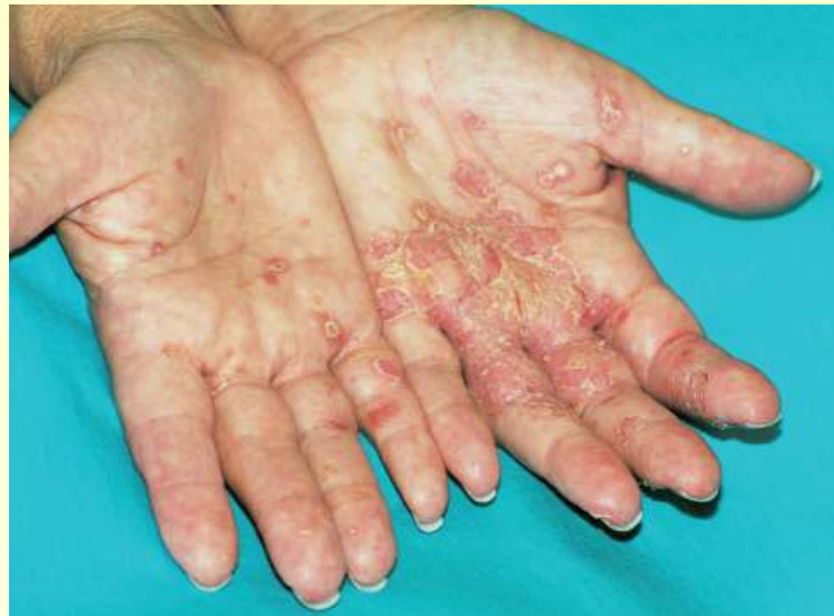
Eczematous Dermatitis

<u>Allergic contact dermatitis</u>



http://dermis.net/bilder/CD193/550px/img0132.jpg

<u>Irritant contact dermatitis</u>



https://www.consultant360.com/sites/default/files/1111Con_PC_Cosmetic.jpg

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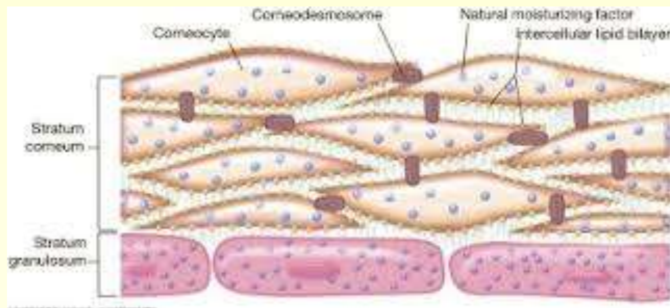
Atopic Dermatitis patients are also susceptible to ICD and ACD.

IRRITANT CONTACT

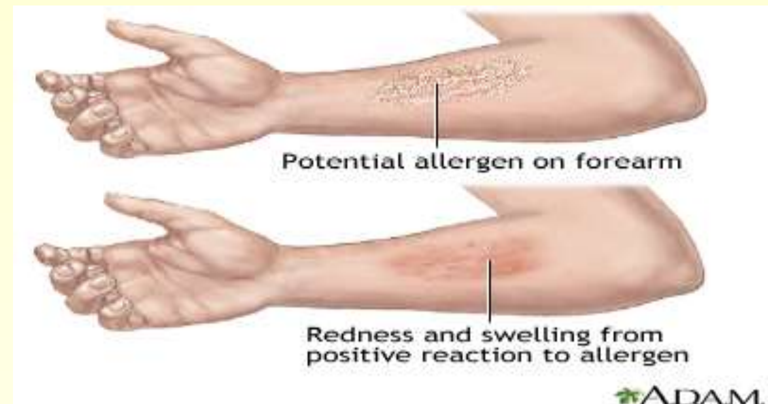
- Strips stratum corneum (protective layer of skin)
- Ex: Overwashing hands, soaps, alcohol sanitizer



http://dermis.net/bilder/CD193/550px/img0132.jpg

ALLERGIC CONTACT

- Allergic reaction (memory T cells)
- Fragrances, emulsifiers, surfactants, preservatives



https://www.consultant360.com/sites/default/files/1111Con_PC_Cosmetic.jpg

www.suggest-keywords.com

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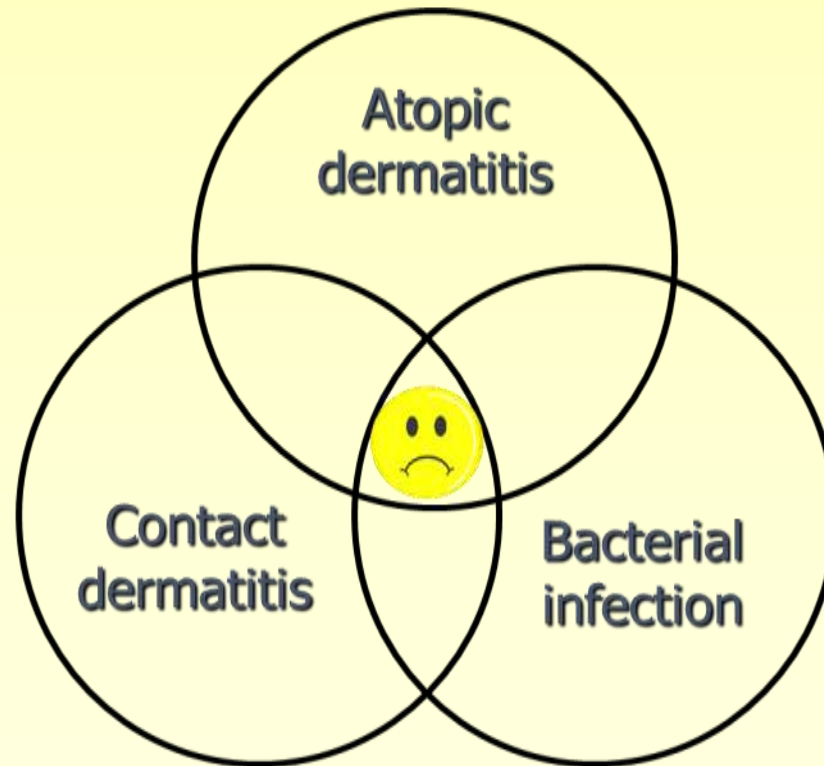
Eczematous Dermatitis is often multifactorial in etiology.



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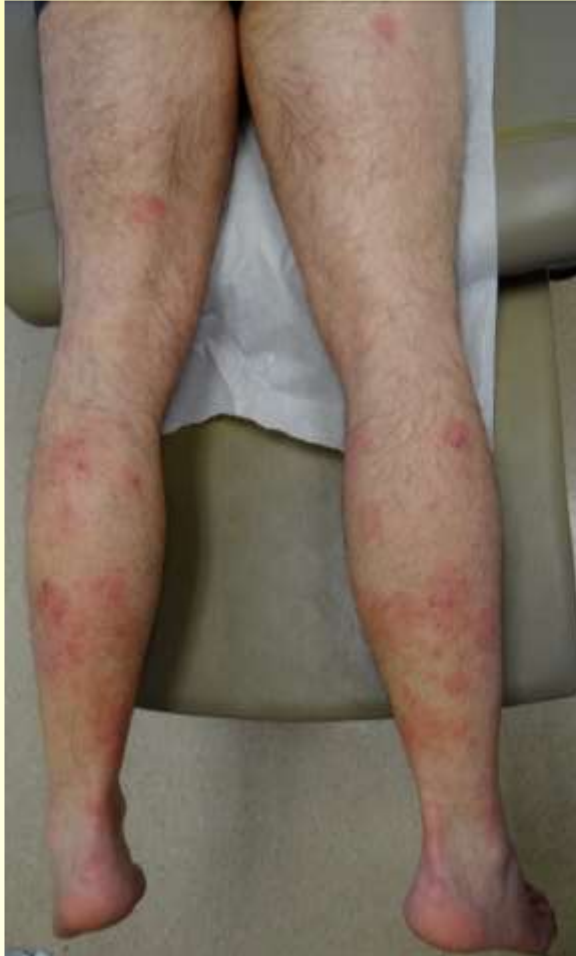
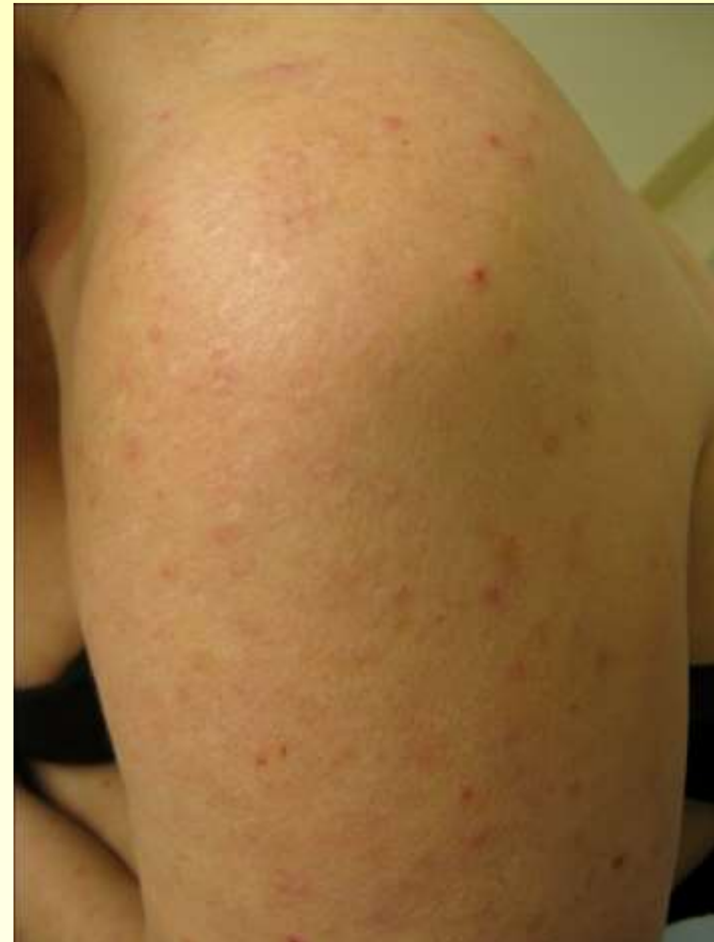
Eczematous Dermatitis

<u>Nummular dermatitis</u>

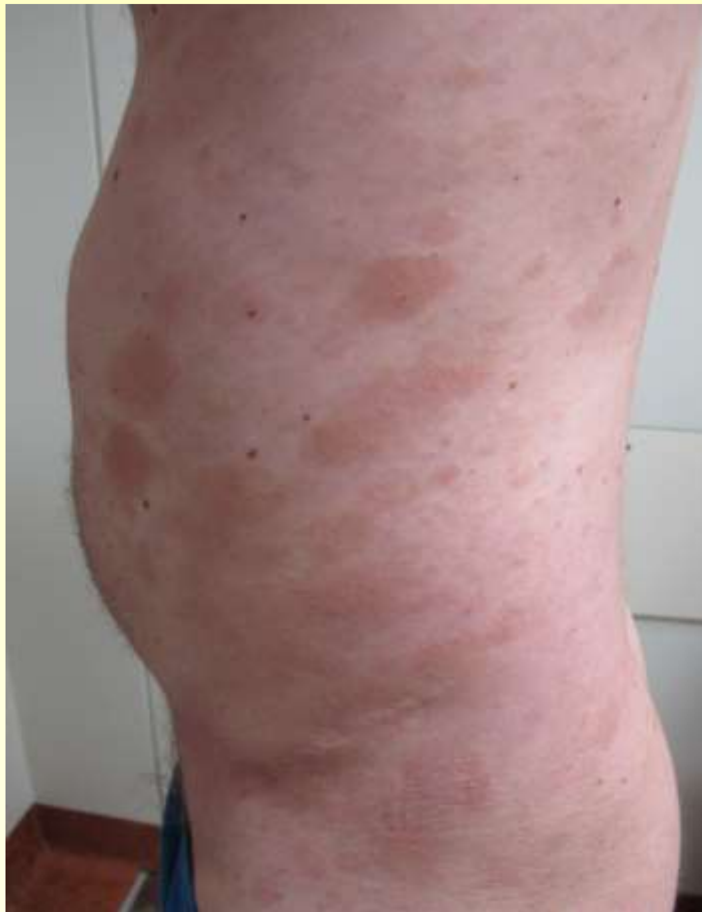


<u>Subacute prurigo</u>



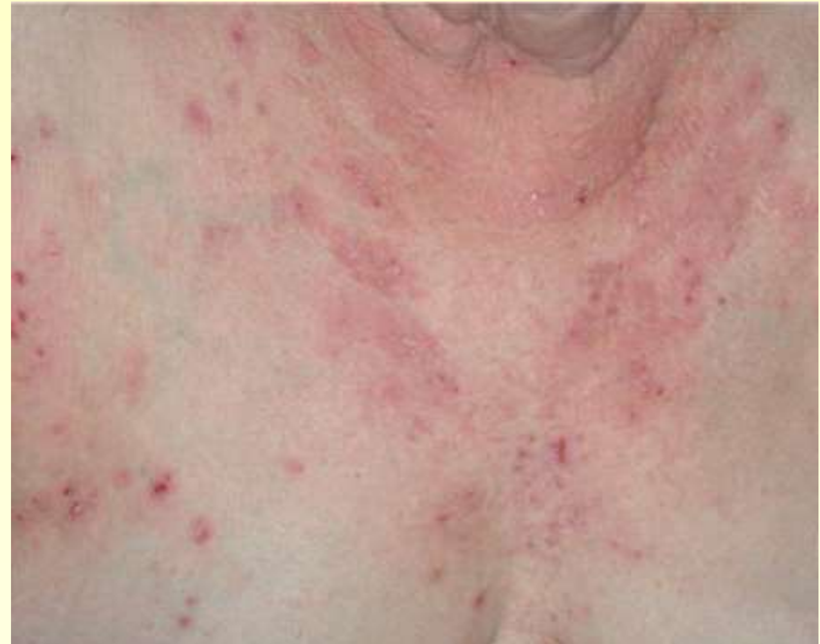
Eczematous Dermatitis

Mycosis fungoides



http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1868387/

Bullous pemphigoid



http://dermaamin.com/site/images/clinical-pic/b/bullous_pemphigoid/bullous_pemphigoid96.jpg

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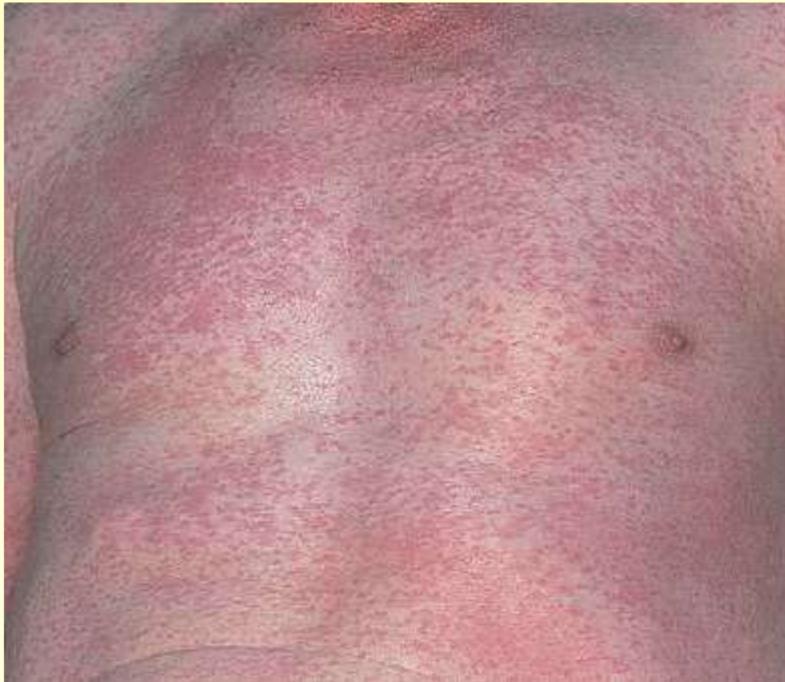
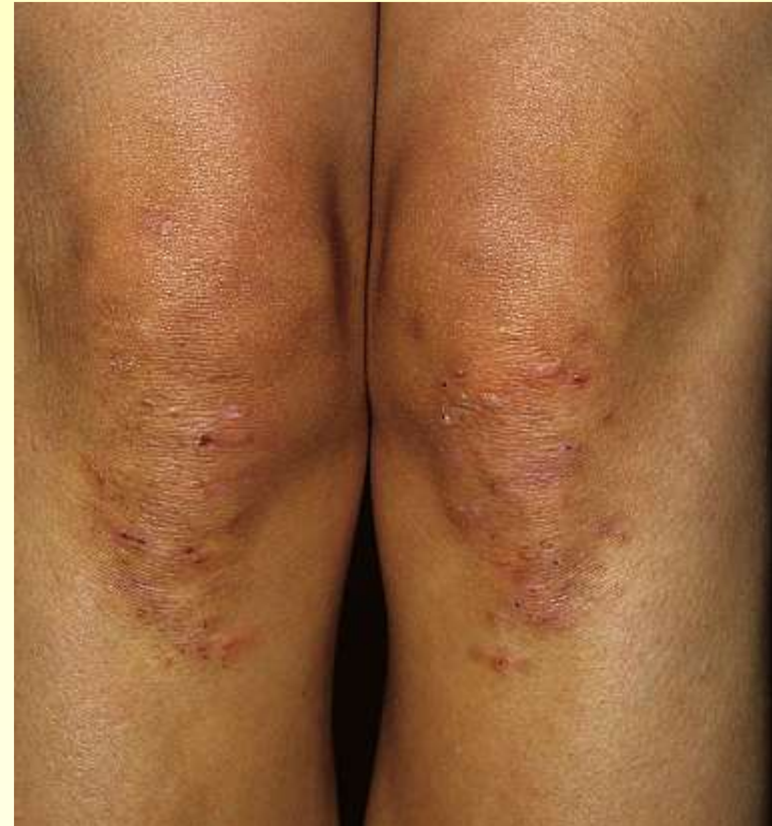
Eczematous Dermatitis

Drug Eruption

Dermatitis Herpetiformis



http://dermaamin.com/site/images/clinical-pic/d/drug_eruption/drug_eruption40.jpg/



http://www.dermaamin.com/site/images/clinical-pic/d/dermatitis_herpetiformis/dermatitis_herpetiformis5.jpg/

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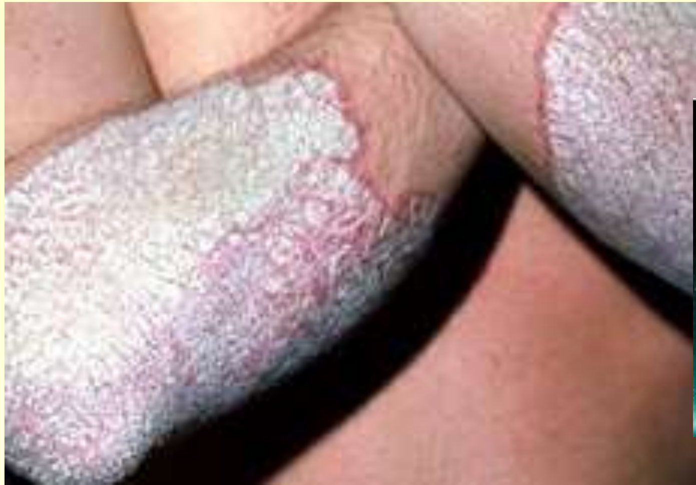
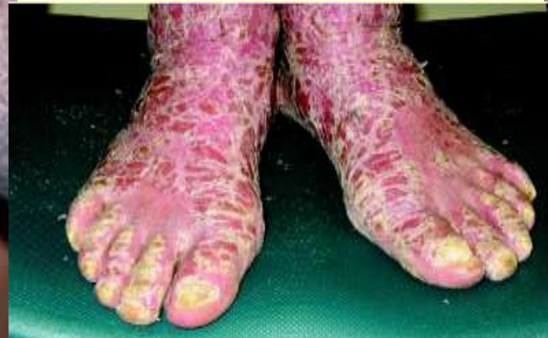
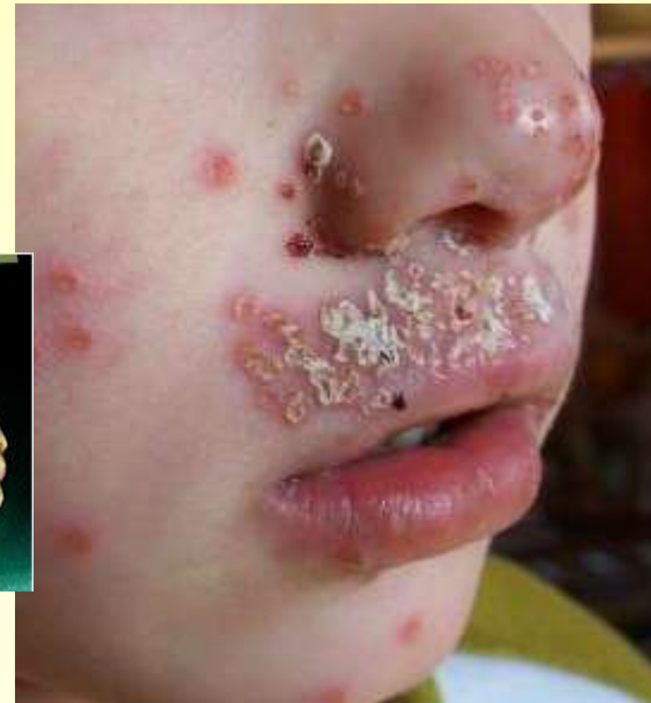
Sometimes this can be difficult to distinguish on clinical exam.

Papulosquamous (psoriasis)





Eczematous (atopic dermatitis)



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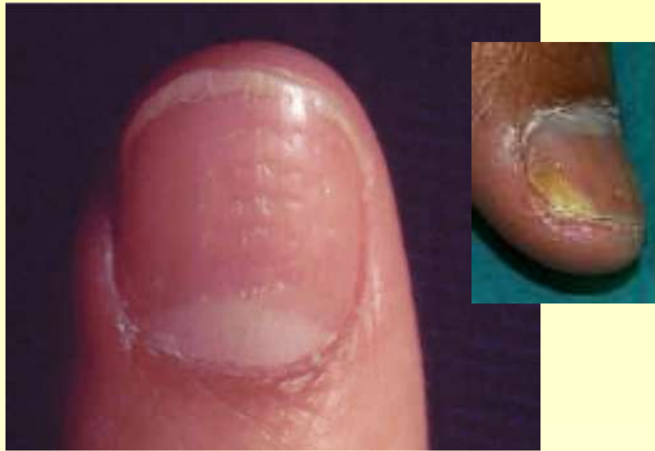
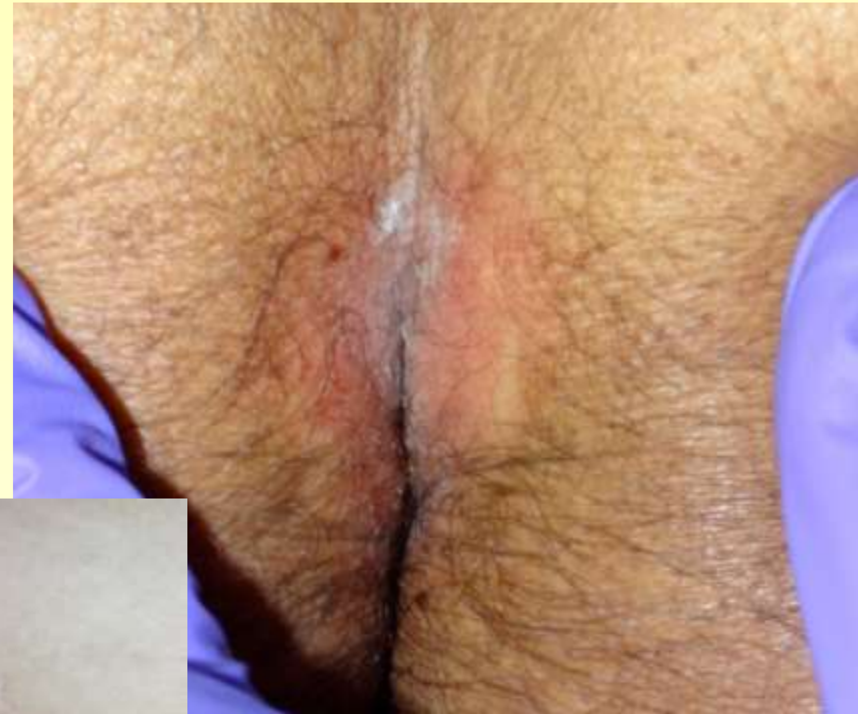
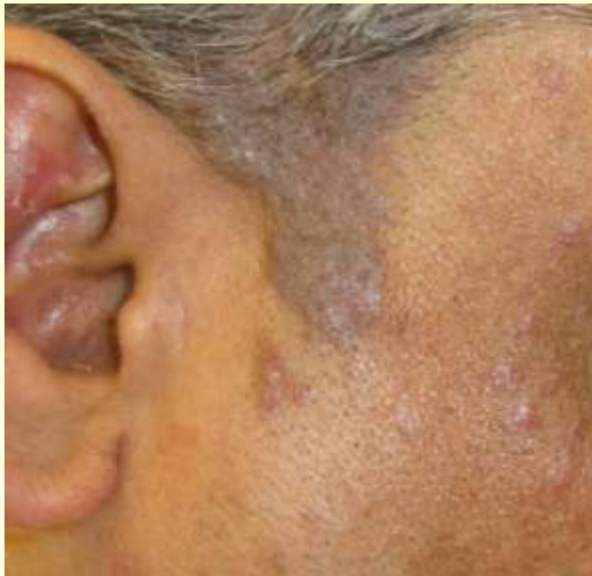
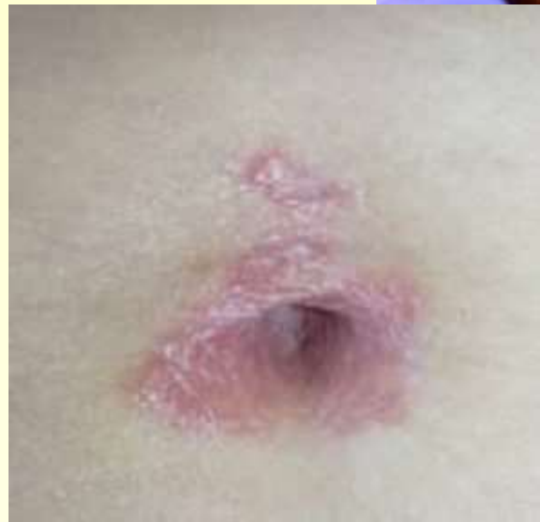
How do we tell eczema from psoriasis? Location, location, location (and biopsy)









http://www.goodskincare.com.au/wp-content/uploads/2016/06/Bellybutton-Psoriasis-300x288.jpg/

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2814072/

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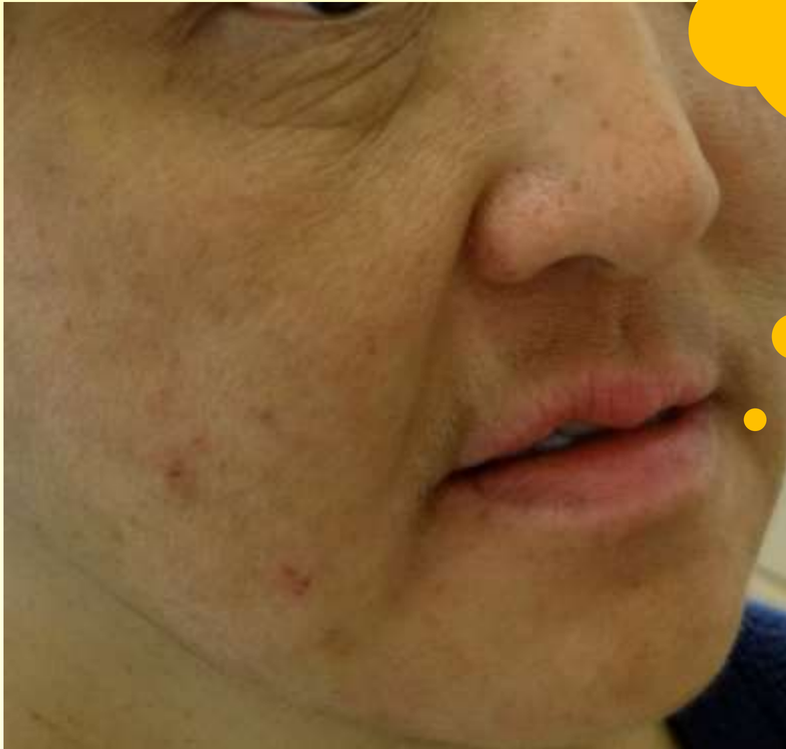
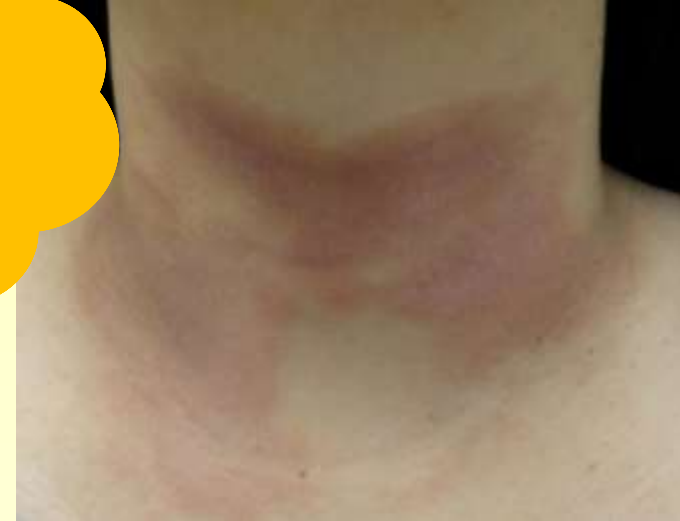
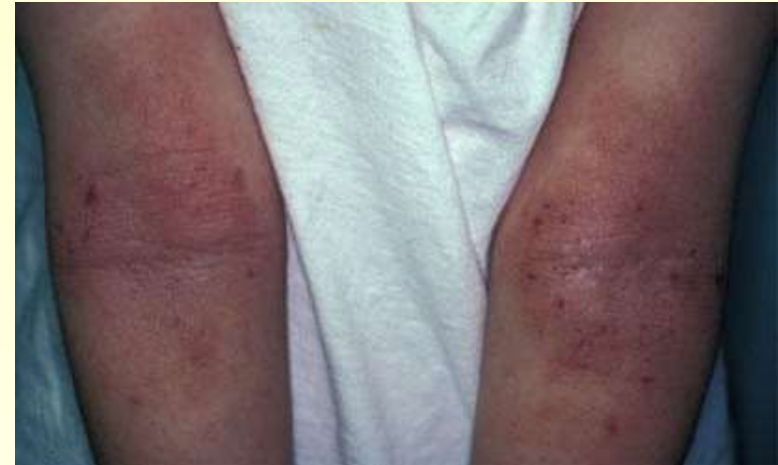
Our atopic patient

"I feel like I am allergic to my own sweat."







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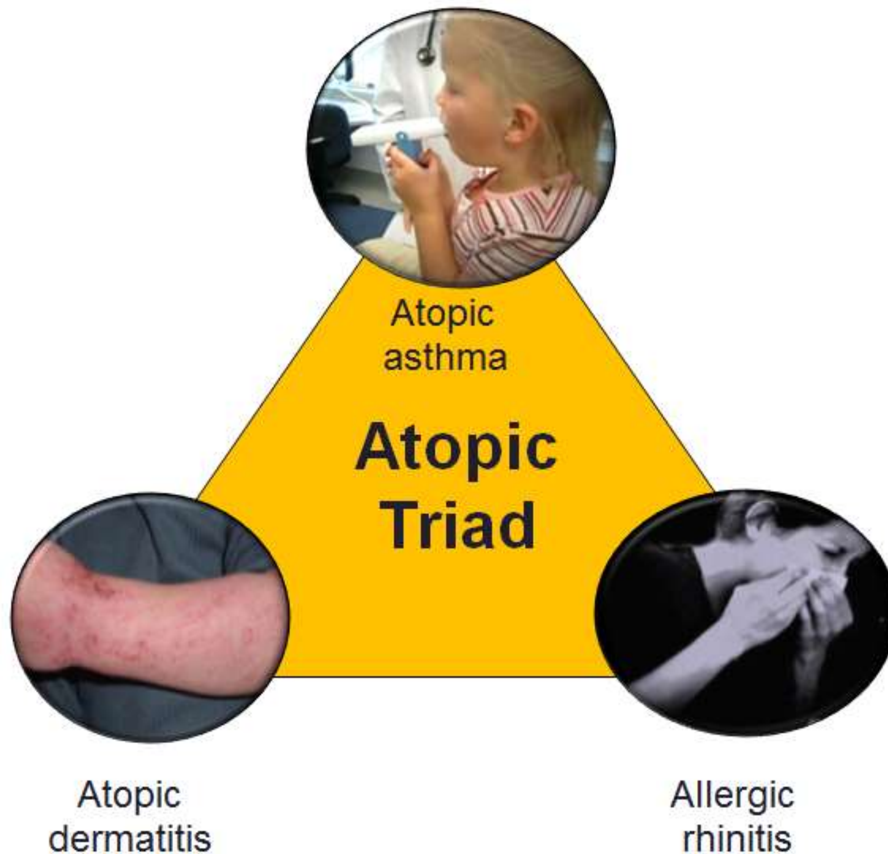
Atopic Dermatitis



https://upload.wikimedia.org/wikipedia/commons/a/a3/Atopic_triad_2.PNG

Personal or family history of:

-Asthma

-Allergic rhinitis

-Atopic dermatitis as a child

-Food allergies

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2814072/

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American Academy of Dermatology Atopic Dermatitis Video

1) Inflammation

2)Disruption of Skin Barrier

Aggravating Factors:
-Allergens
-Bacteria
-Heat/Dry Environments
-Emotional Stress

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http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2814072/

We can use barrier repair to tell psoriasis and eczema apart!

Eczematous dermatitis responds extremely well to barrier repair; papulosquamous dermatitis not so much (topical steroids only go so far in psoriasis patients)

"Barrier repair" = EMOLLIATION (and topical steroids)

NOT PREDNISONE

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http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2814072/

A word on PREDNISONE and ECZEMA

Without emolliation (repair of the skin barrier), it is like using…

Heroin for depression

Prednisone for pneumonia

Vodka for delirium tremens

It will suppress the condition, but it may come back with a vengeance!

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http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2814072/

SOAK AND SMEAR REGIMEN

1) Mix: Vanicream (7.5 oz) and clobetasol ointment (2 oz) in a bowl
2) Soak in WARM (not hot!) water bathtub for 15 minutes [1 cup vinegar or 1/4 cup bleach q3d]
3) Pat dry
4) Smear above mix from neck down
5) Do 2x/day for 1 week
6) After 1 week, decrease to 1x/day
7) After 2 weeks, decrease to 1x every other day

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2814072/

Common “mystery” referrals

1) Eczematous psoriasis overlap
2) Perioral dermatitis, rosacea, seborrheic dermatitis ???
3) Recalcitrant hand dermatitis
4) Erythroderma

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2814072/

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History

34 yo male presented with rash on bilateral arms, responded to prednisone taper or IM kenalog and clobetasol

-Started after azithromycin antibiotic

-Biopsy: Impetiginized LSC (Lichen Simplex Chronicus) in background of nummular dermatitis vs. atopic dermatitis

-Two months later: photodistributed and around umbilicus

-Biopsy: Pustular dermatitis c/w pustular drug (eosinophils and lichenoid infiltrate)

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2814072/

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History

- Annular plaque on arm was KOH positive (frequent use of topicals predisposes patients to tinea!)
- Nickel sensitive can contribute (especially if having foods high in nickel); history of rash when plating copper and nickel
- Sun protection important since pt has Peruvian blood (increased risk of PMLE = Polymorphous Light Eruption)

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http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2814072/

"Aren't we so glad we finally know what is going on!"

- Treated UV protection (UV beads), terbinafine 250 qd x 4 weeks, doxycycline for staph

But . . .

- Within a few weeks he developed full body eruption . . . and it keeps coming back (requiring multiple IM kenalog)

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2814072/

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Interim history

- Biopsy: Psoriasiform dermatitis with dense lichenoid infiltrate & superimposed LSC
- DIF: Focal intercellular staining w/ IgG; IIF neg
- Patch test results:
  - Nickel, cobalt, and Fragrance
  - Methyldibromo glutaronitrile phenoxyethanol
  - Iodopropynl butyl carbamate
  - Black rubber mix!! (airborne? when he works in commercial refrigeration and air conditioning)

"Aren't we so glad we finally know what is going on!"

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2814072/

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But . . .

- Despite protection of arms it keeps coming back; no longer working in commercial industry
- Pt convinced it is related to beer
- Low nickel diet
- Controlled with mycophenolate and IM kenalog
- Using hypoallergenic products (only from CAMP)
- But it keeps returning and then really starts to flare; topical cortisones appear to no longer be working. . .

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http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2814072/

Textile series: Positive to melamine formaldehyde in two locations!

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http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2814072/

“Aren’t we so glad we finally know what is going on!”

He changes his uniform and gets IM kenalog

For immunosuppression, given his positive quantiferon, took 9 months of isoniazid.

But . . .

- Within a few weeks it returns despite mycophenolate mofetil.
- He thinks that it might be celiac since beer has barley.

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http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2814072/

Interim history

- GI workup: Moderately elevated anti-gliaden IgA (14 = equivocal); IgG was normal; TTG was negative. Anti-endometrial antibody negative; Biopsy of upper GI tract showed duodenal mucosa with regenerative/reactive changes
- Biopsy for DIF negative
- Allergy workup: For foods positive for beef, string bean, lettuce (borderline to corn)

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http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2814072/

Interim history

- We decide since primary morphology is papulosquamous we will start methotrexate. He likes this medication and feels it works.
- Gets MSSA abscess on face and starts doxycycline daily
- Periodic IM kenalog

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http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2814072/

So, what exactly is going on?

Psoriasis with multiple contact allergies and PMLE predisposition

- Patients can have mixed morphologies:
  - Eczematous dermatitis and urticaria
  - Papulosquamous and eczematous dermatitis
- Select therapies based on the primary morphology.
- Explain to patients by distinguishing
  - Diagnostic and Therapeutic options
  - Exogenous and Endogenous sources

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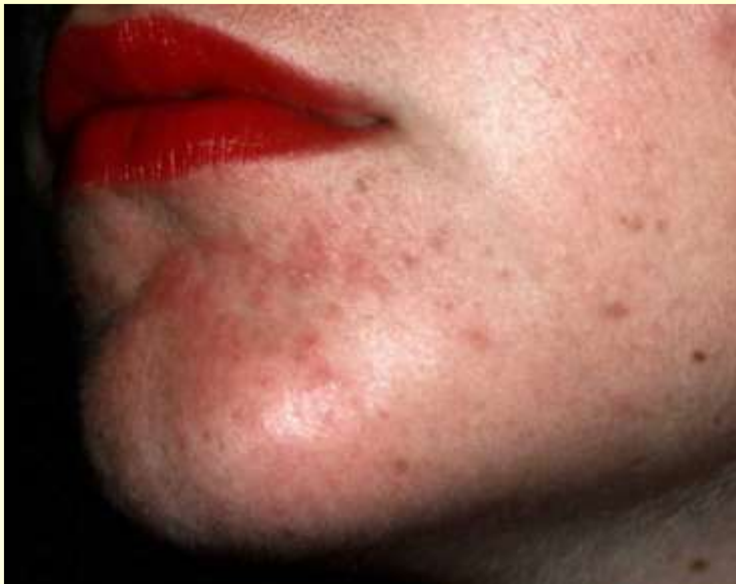
http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2814072/

"Perioral dermatitis"

- Acneiform (rosacea)
  - Topical ivermectin
  - Oral antibiotics
  - Topical sulfur
- Dermatitic (seborrheic dermatitis)
  - Topical pimecrolimus
  - Patch testing



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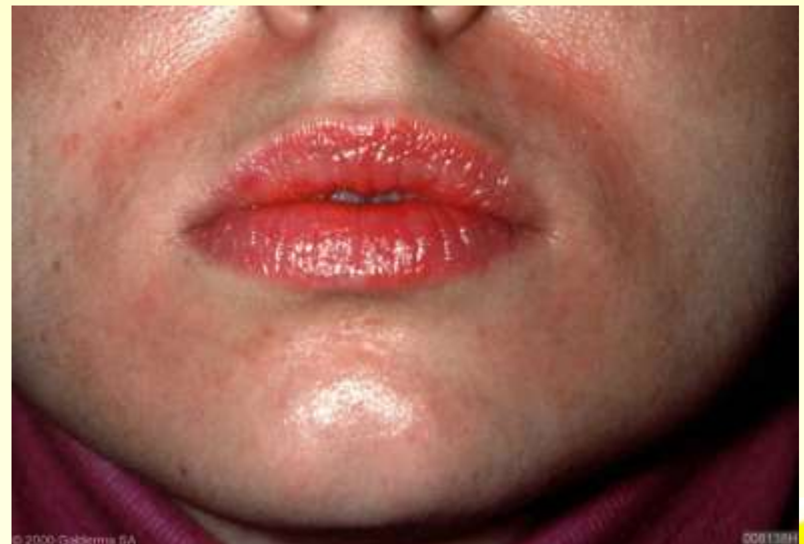

https://www.dermquest.com/imagelibrary/large/008138HB.JP

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Rosacea variant #1

22 yo female who periodically breaks out with pustules covering her face. Cultures are always negative.

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2814072/

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Demodex folliculitis

- History of lupus; on prednisone 5 mg daily and mycophenolate mofetil
- Previous bacterial and viral cultures negative
- Recurred every few months; responded to hibiclens, desoximetasone, doxycycline or keflex, Burow's, mupirocin
- Best course of action: ivermectin and/or topical sulfur and wet prep

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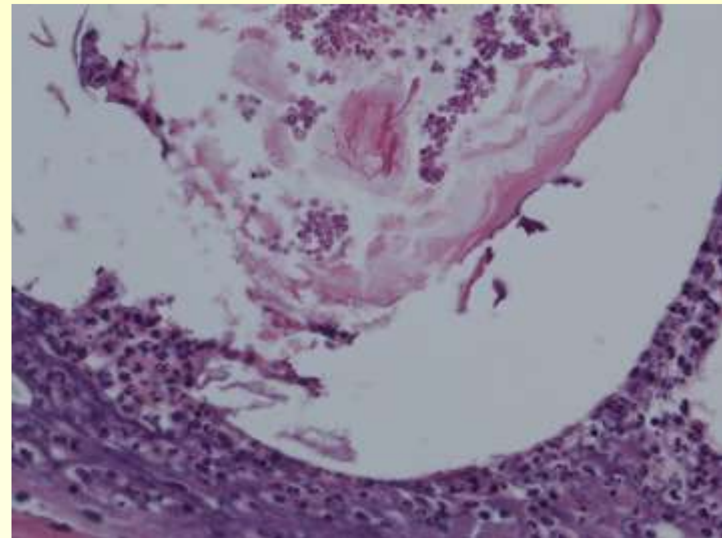
http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2814072/

Acneiform Eruptions on Face vs. Scalp

- Face think demodex (mite)
- Scalp think pityrosporum (yeast)

http://upload.wikimedia.org/wikipedia/commons/0/03/Demodex_mite_1.JPG



http://www.dermpedia.org/files/images/13131119.JPG

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Neurogenic Rosacea

- Propranolol XL 160 – 160 – 80 – 80 mg
- Nicotinamide 500 mg bid
- Hydroxychloroquine 400 mg qd
- 2700 mg neurontin
- Nortriptyline 50 – 50 – 75 mg
- Duloxetine 30 mg bid
- Marinol 2.5 mg bid

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2814072/

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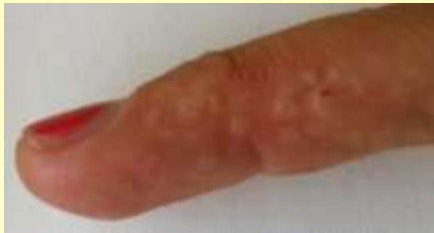
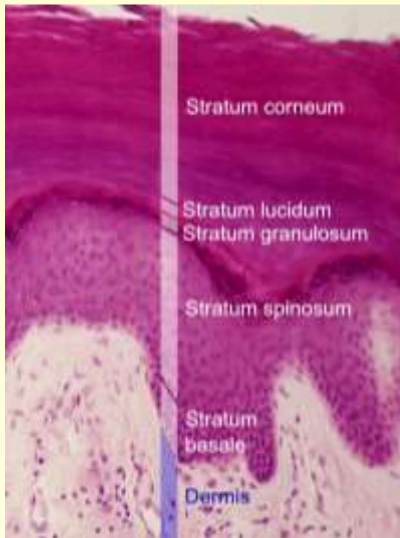
Vesiculobullous hand dermatitis
Hyperkeratotic hand dermatitis



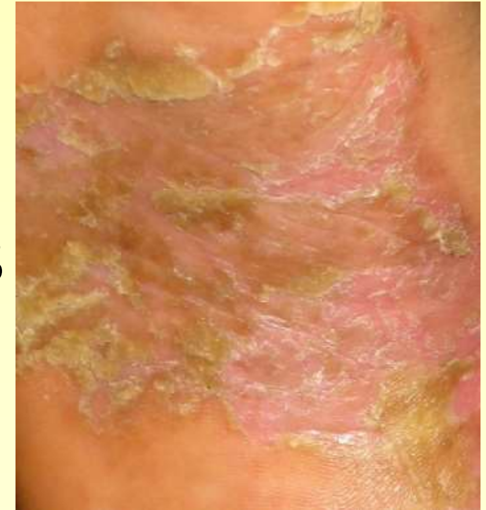


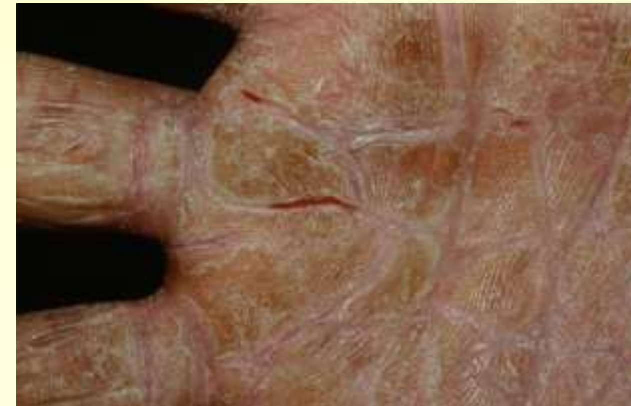
VB

- -atopic
- -vesicles
- -men
- -steroids
- -patch testing

HK

- -psoriasis
- -fissures
- -women
- -tar
- -light





https://healthh.com/wp-content/uploads/2014/05/dyshidrotic-eczema-pictures-2.jpg
http://1.bp.blogspot.com/-MH673BiMFcI/UPFqxvXdmSI/AAAAAAAALuY/rwrnyzP1uDI/s1600/Epidermal-layers+of+skin-stratum-lucidum.png
http://regionalderm.com/Regional_Derm/RD_Large/Hyperkeratotic_eczema9.jpg

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PROTECTION AND MOISTURIZATION

- **Irritant contact** - water, soap
- **Allergic contact**

http://livehealthywithus.com/

- Moisturize: **small amount throughout the day**!
- Luke-warm water
- Mild soap
- Cotton, vinyl gloves when cooking, handling corrosive substances
- Leather gloves in cold
- Use medications sparingly

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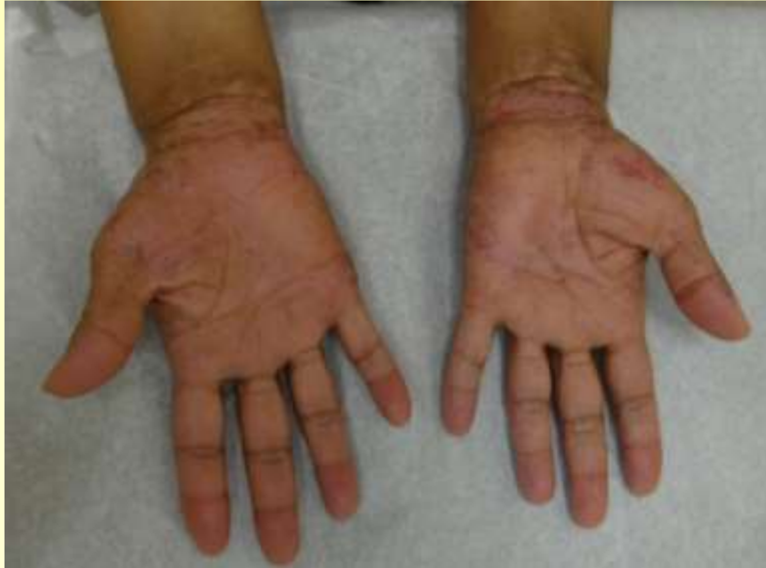
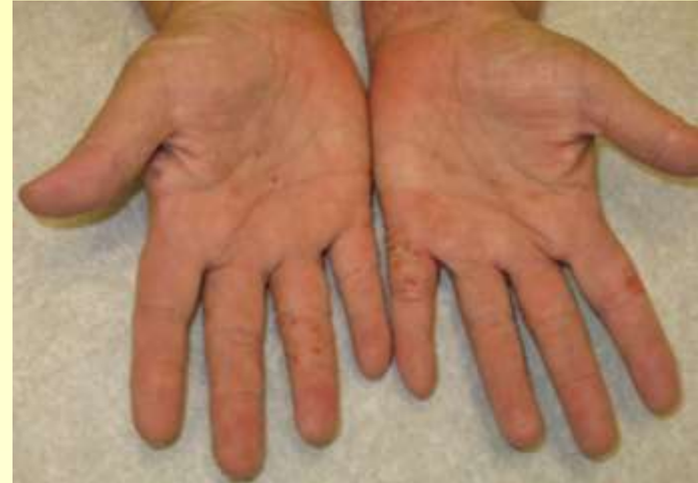
http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2814072/

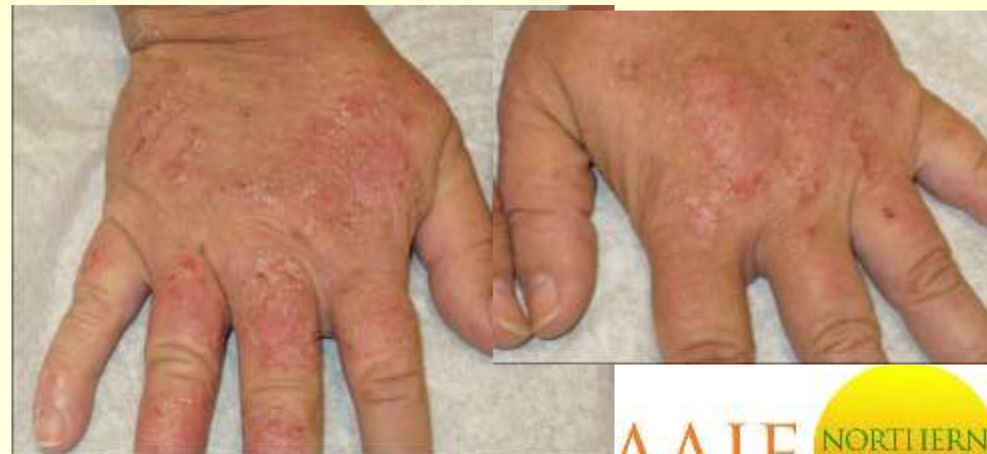
Common “mystery” referrals





Dorsal hands

Palms



http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2814072/

Dorsal hands: think psoriasis, lupus, dermatomyositis,
photo, AND allergic contact (biopsy?)

Allergic contact dermatitis to textile allergens!
(It is easier to work backwards)

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2814072/

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Conclusion

1. Use clinical clues or biopsy to distinguish between eczematous and papulosquamous disease
2. Clarify terminology with the patient do that they can understand how to distinguish between diagnoses (seb derm, rosacea, perioral dermatitis)
3. Appropriately patch test patients with dermatitic perioral dermatitis and vesiculobullous hand dermatitis

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