DERMATOLOGY CASE STUDIES THROUGH THE LIFESPAN

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2024 National Nurse Practitioner Symposium

DISCLOSURES

- Peggy Vernon, RN, MA, CPNP-PC, CNS, DCNP, FAANP, FSDNP has no financial relationships with commercial interests to disclose
- Any unlabeled/unapproved uses of drugs or products referenced will be disclosed

OBJECTIVES

- List one treatment option for treating adult atopic dermatitis
- Identify one causative agent for Henoch-Schonlien purpura
- Discuss the difference between treating adolescent and adult acne

RESTRICTIONS

- Permission granted to 2024 National Nurse Practitioner Symposium and its attendees
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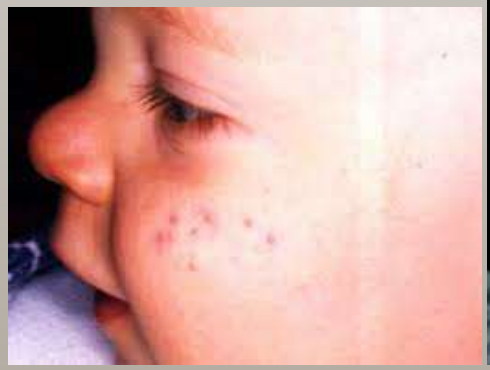
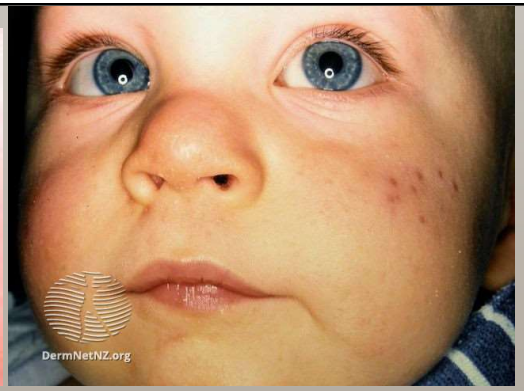
- Contact Peggy Vernon at creeksideskincare@icloud
- All photos courtesy of Peggy Vernon, Katrina Mierkey, Visual DX, DermNet NZ

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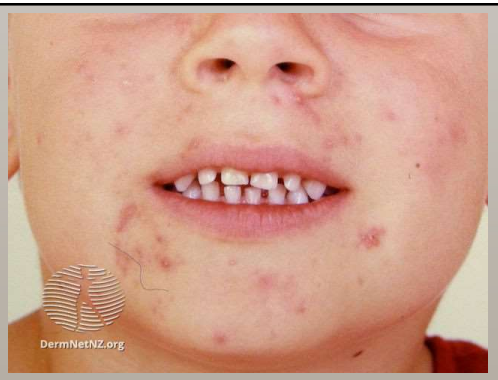
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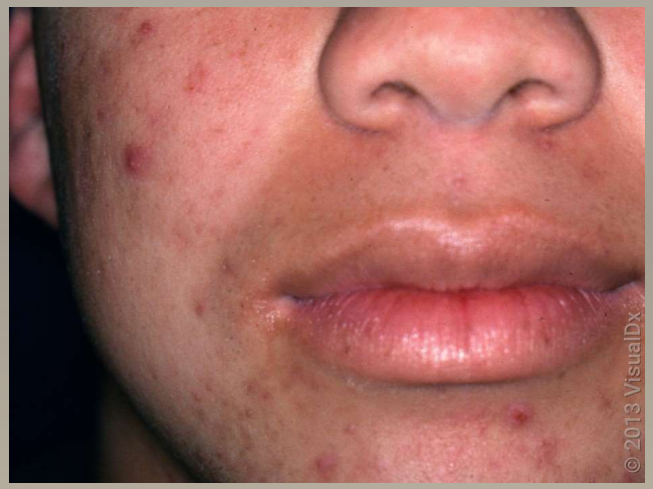
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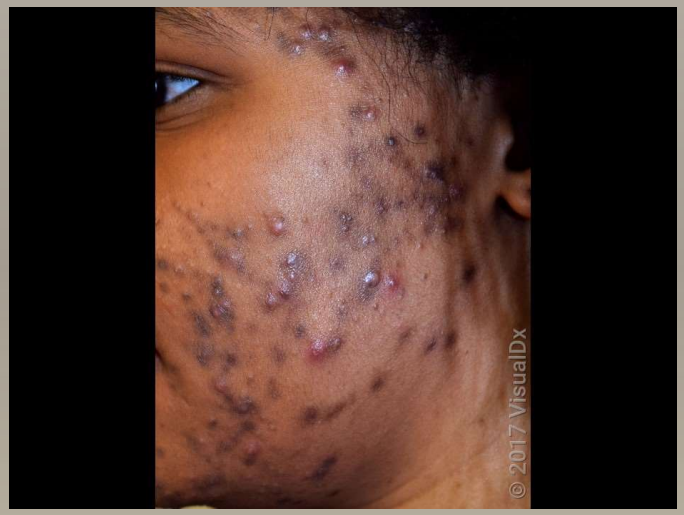
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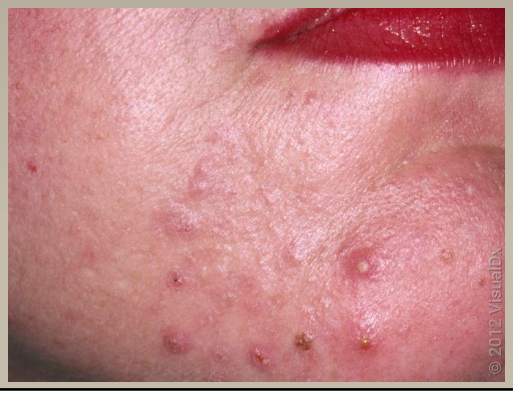
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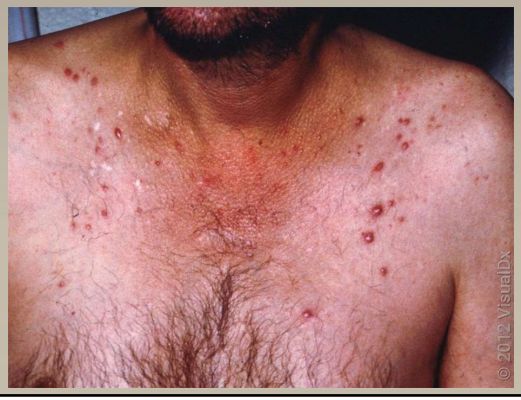
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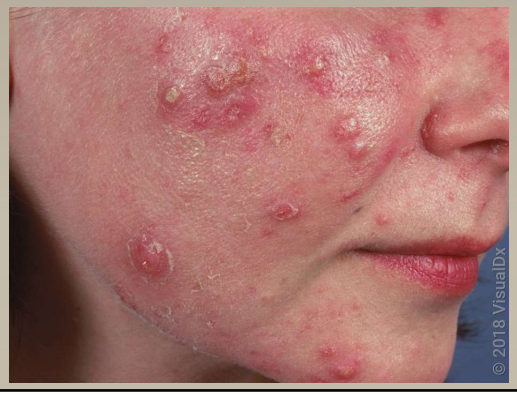
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ACNE MEDICATIONS

- Keratolytics
- Antibiotics
- Antibacterials
- Anti-inflammatories
- Hormones
- Isotretinoin

KERATOLYTICS
MECHANISM OF ACTION

- Soften keratin
- Loosen cornified epithelium
- Cause swelling and softening of viable cells
- Epidermis desquamates, making underlying layers accessible to medication

RETINOIDS
MECHANISM OF ACTION

- Decrease cohesiveness of follicular epithelial cells
- Promotes detachment of cornified cells
- Increases turnover rate of thin, loosely adherent corneocytes
- Decrease comedone formation

RETINOIDS

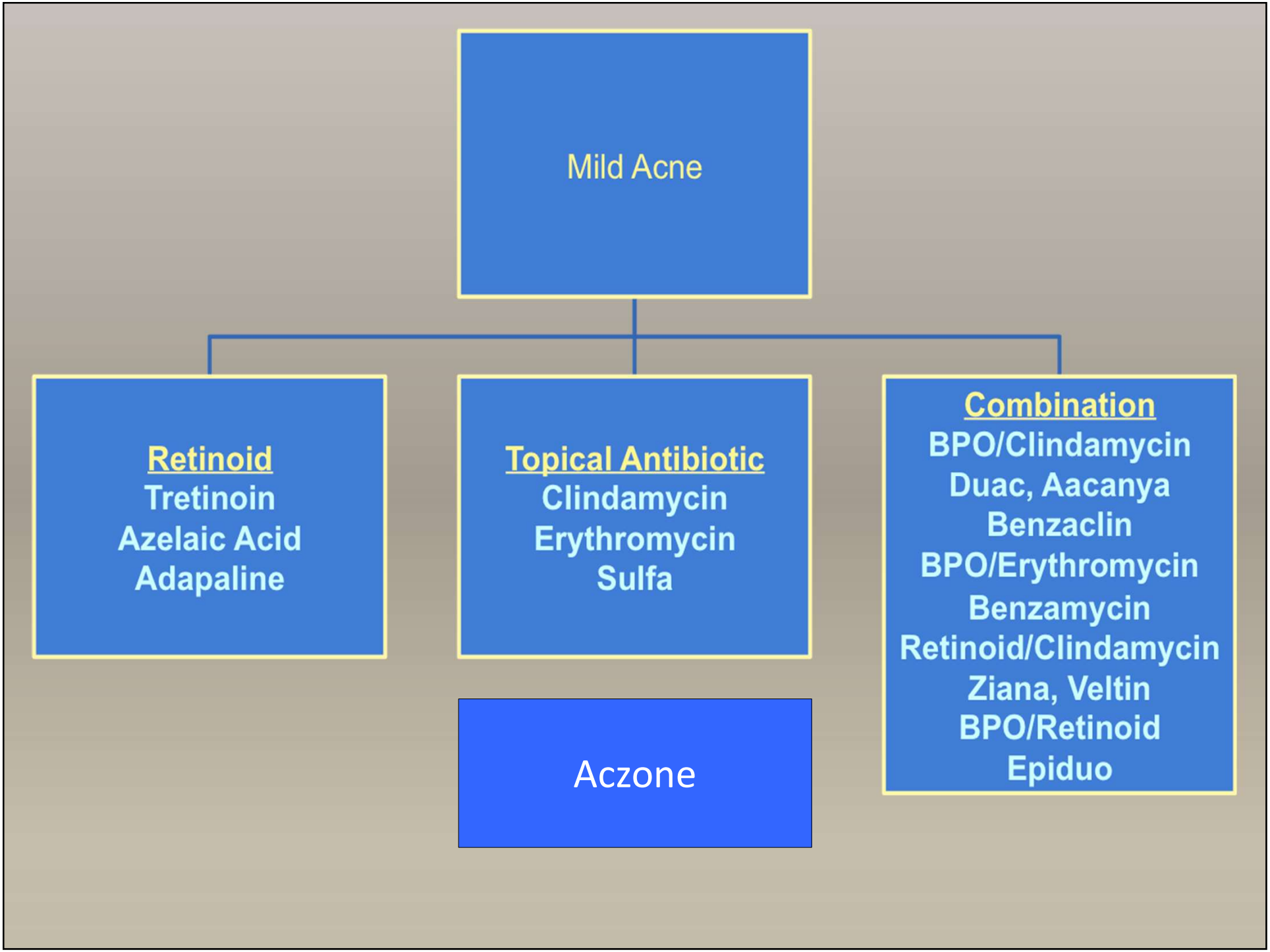
- Azelex: Azelaic acid 20% antibiotic/keratolytic
  - Molecular weight 188
  - Pregnancy Category B
- Differin: .1% gel, cream, solution, pledgettes
  - Molecular weight 412
  - Pregnancy category C
- Retin A: .025%, .05% cream, .1% cream
  - .01%, .025 gel
  - .05% liquid
  - .1% aqueous gel (Micro)
  - Molecular weight 300
  - Pregnancy Category C
- Tazorac: .05%, .1% aqueous gel, cream
  - Molecular Weight 351
  - Pregnancy Category C

TOPICAL ANTIBIOTICS

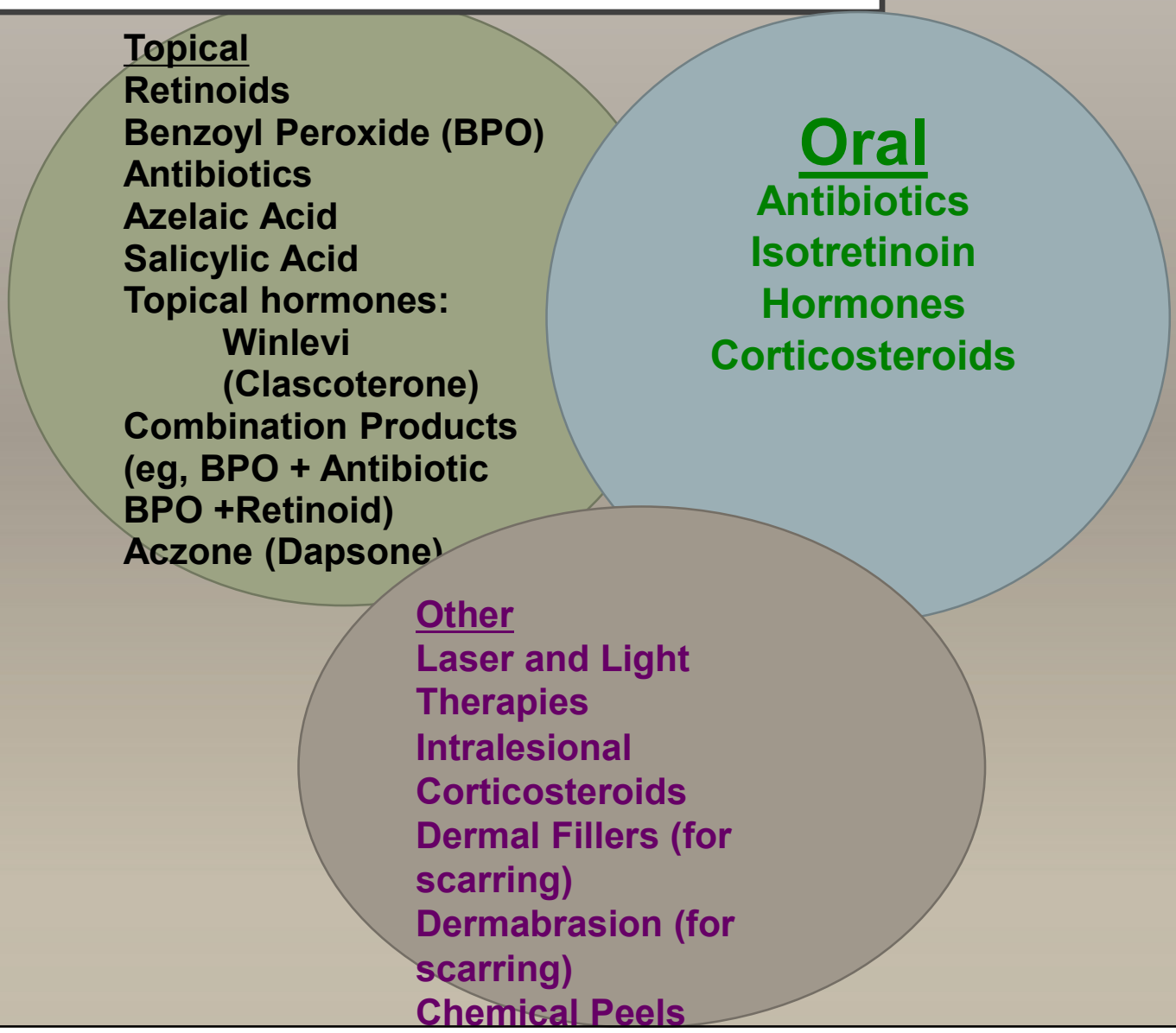
- Antibacterial and anti-inflammatory effects
- Indirect effect on comedogenesis (by reducing C acnes, which would otherwise activate the immune system and intensify comedogenesis)
- Should not generally be used as monotherapy
  - Strains of *C acnes* may develop that are resistant to the antibiotic
  - Resistance prevented by using in combination with BPO

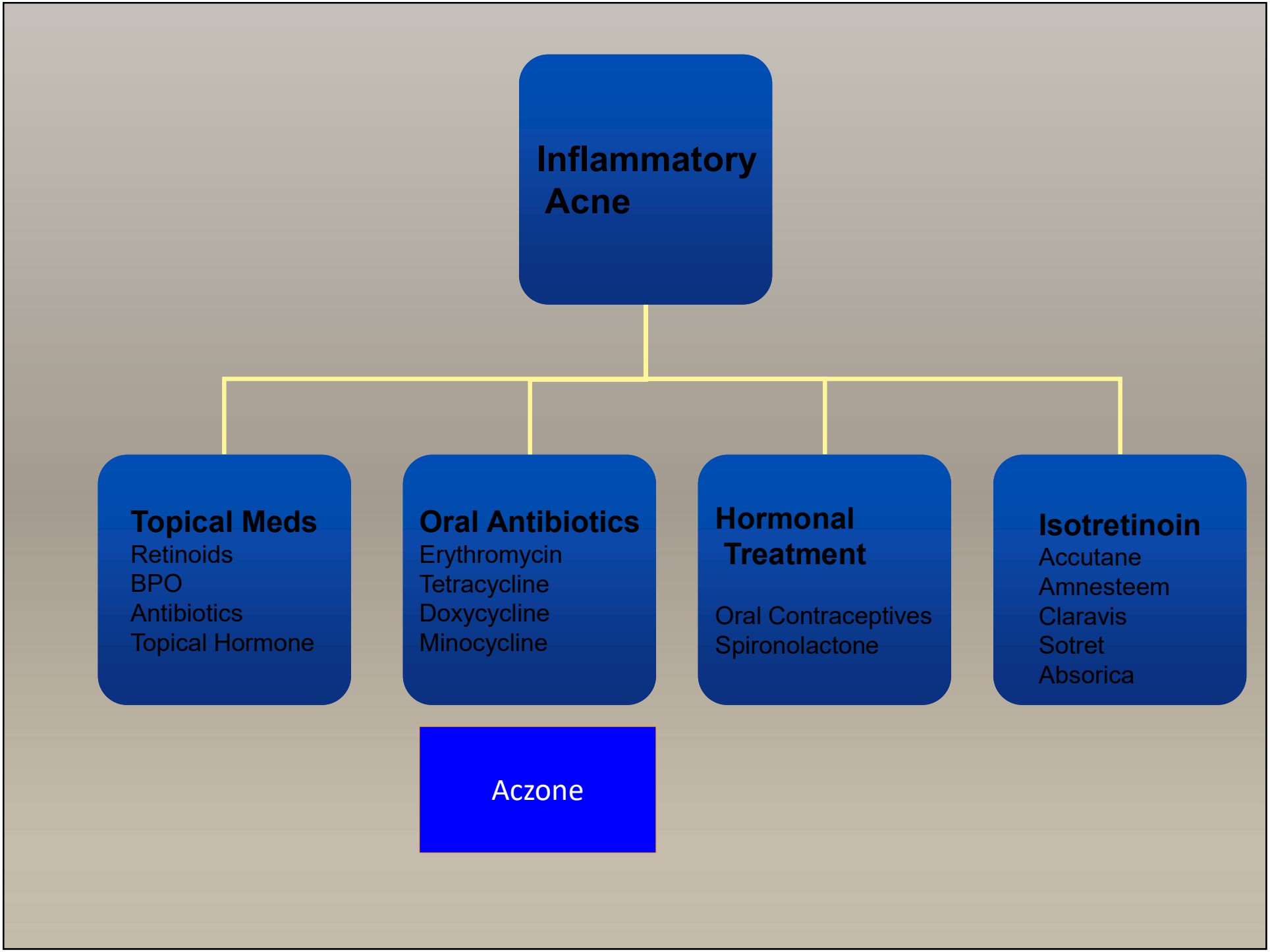
TOPICAL ANTIBIOTICS

- Erythromycin 2%: solution, lotion, gel, pledgettes
  - Pregnancy Category B, Molecular weight 733.94
- Sulfa: lotion, cream, wash
  - Molecular weight 214.243
  - Pregnancy Category C
- Sulfacetamide: Klaron, Ovace
  - Molecular weight 214
  - Pregnancy Category C
- Clindamycin: Cleocin solution, lotion, gel, foam
  - Molecular weight 461
  - Pregnancy Category B
- Minocycline Foam 1.5% (Amzeeq, Zilxi)
  - Molecular weight 457.483
  - Pregnancy Category D


Mild Acne
Retinoid
Tretinoin
Azelaic Acid
Adapaline
Topical Antibiotic
Clindamycin
Erythromycin
Sulfa
Aczone
Combination
BPO/Clindamycin
Duac, Aacanya
Benzaclin
BPO/Erythromycin
Benzamycin
Retinoid/Clindamycin
Ziana, Veltin
BPO/Retinoid
Epiduo

CURRENT TREATMENT OPTIONS




Inflammatory Acne
Topical Meds
Retinoids
BPO
Antibiotics
Topical Hormone
Oral Antibiotics
Erythromycin
Tetracycline
Doxycycline
Minocycline
Hormonal Treatment
Oral Contraceptives
Spironolactone
Isotretinoin
Accutane
Amnesteem
Claravis
Sotret
Absorica
Aczone

SPIRONOLACTONE

- Oral: 25 mg, 50 mg, 100 mg

Mechanism

- Blocks androgen receptors
- Inhibitor of 5α-reductase

Clinical

- Women with therapy-resistant acne (not FDA approved for acne)

Safety

- Menstrual irregularities, breast tenderness/enlargement, lethargy, headache
- Menstrual irregularities prevented when taken with oral contraceptive
- Pregnancy Category C; feminization of male fetus if taken while pregnant

Topical Spironolactone 5%:

(Winlevi)

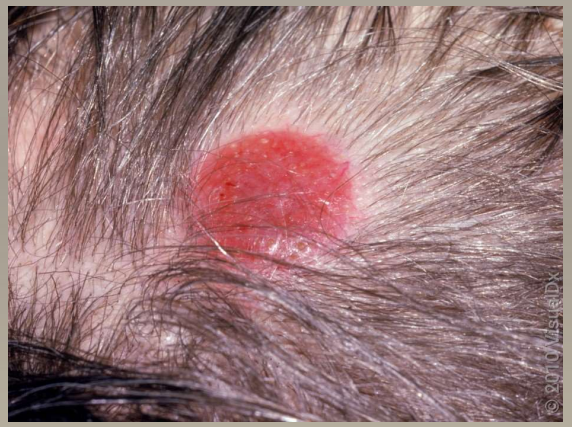
Safe for males and females

Molecular Weight 416

Pregnancy Category C

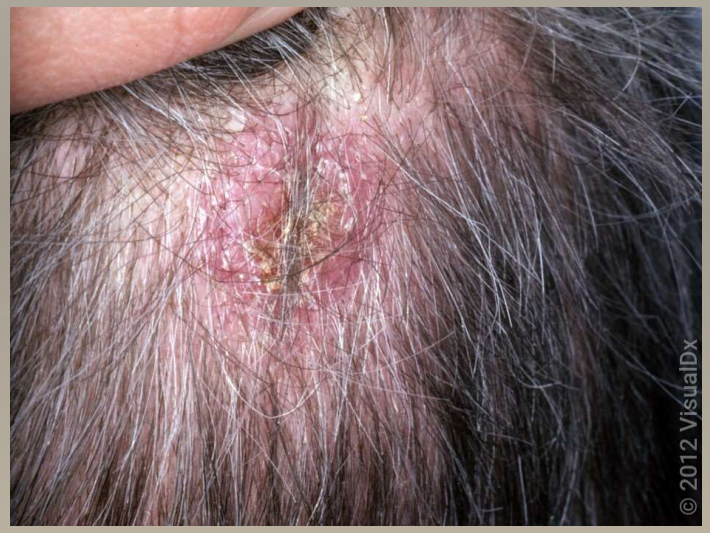
57 YEAR OLD FEMALE

- Papules and plaques of hair loss on vertex and frontal scalp
- Mostly asymptomatic; occasionally very tender
- Few retention hairs
- Present for 6 months
- PMH: Breast CA successfully treated with lumpectomy and radiation 3 years ago



Differential Diagnosis

- Alopecia Areata
- Discoid lupus
- Central centrifugal cicatricial alopecia
- Sarcoidosis
- Cyst
- Alopecia Neoplastica

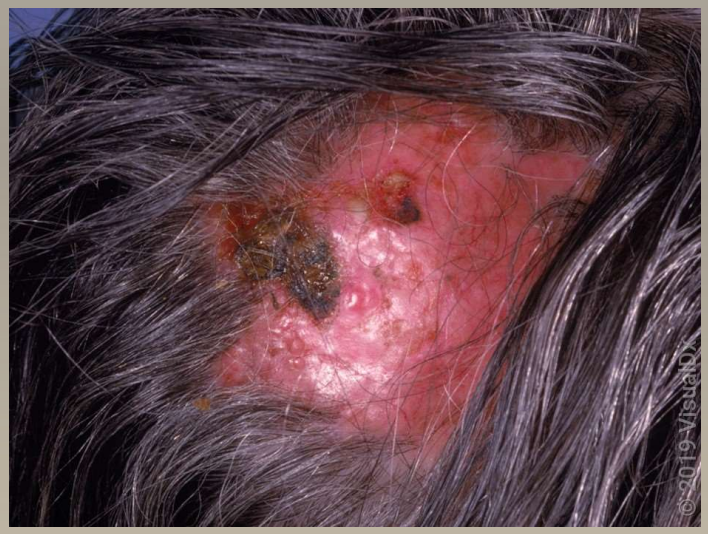


Tests

- Punch biopsy

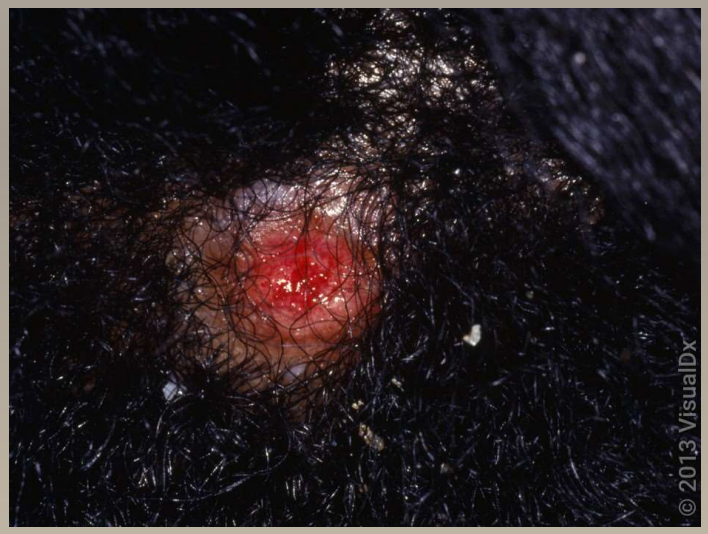
ALOPECIA NEOPLASTICA

- Cutaneous metastatic disease
- Rare
- Metastatic spread through lymphatic and/or hematogenous systems
- Invasion of tumor into deep dermis
- Hair regrowth not globally seen
- More common in females, Northern European descent



ALOPECIA NEOPLASTICA TREATMENT

- Treat underlying malignancy
- Co-manage with oncology
- Alopecia may or may not resolve with treatment of underlying cancer



30 YEAR OLD FEMALE

- Areas of hair loss with thick sticky yellow scale
- Non-tender
- No adenopathy
- No one else in family with symptoms

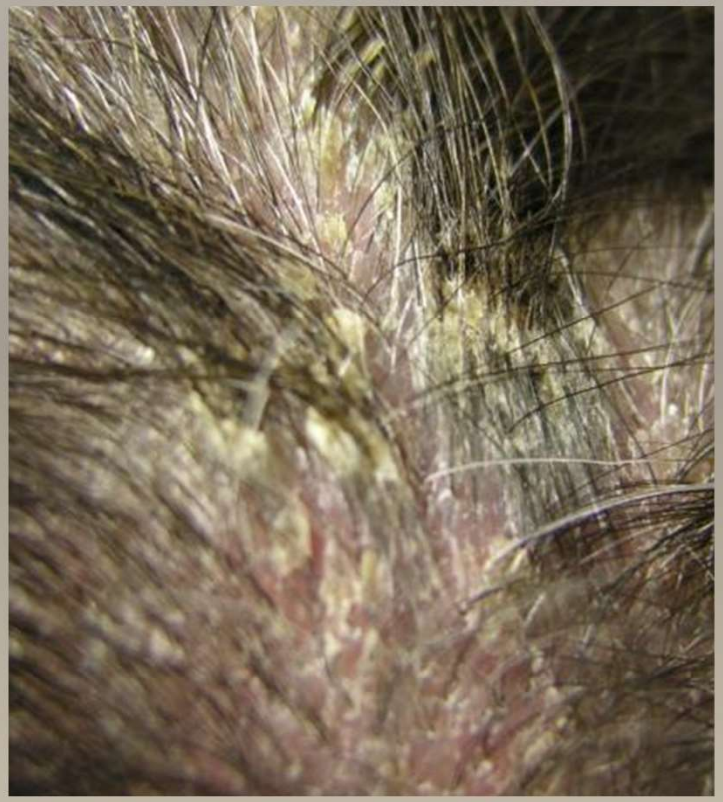
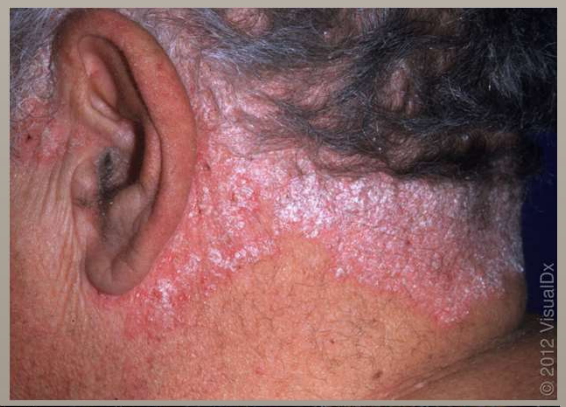
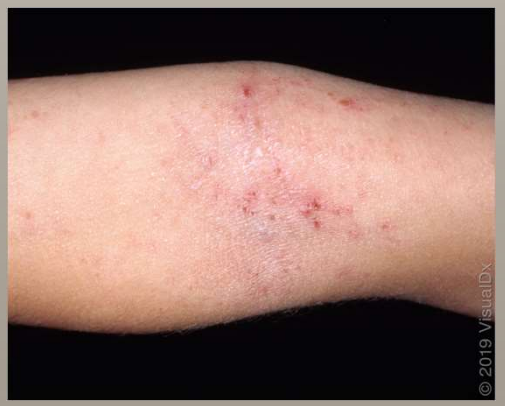


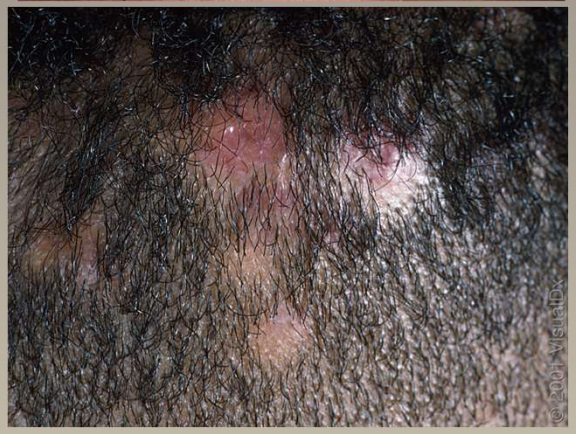
Photo courtesy
Visual DX

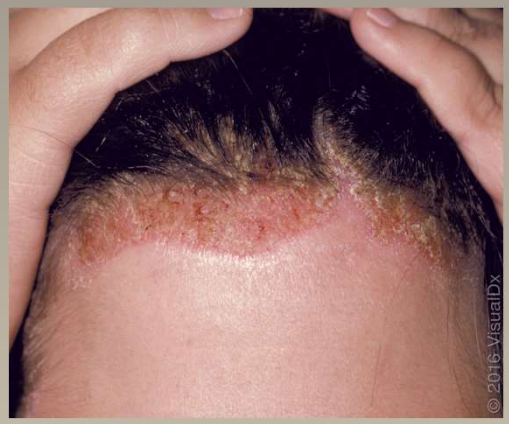
DIFFERENTIAL

- Atopic dermatitis
- Psoriasis
- Pityriasis Amentacea
- Seborrheic dermatitis
- Tinea capitis









Photos courtesy Visual DX

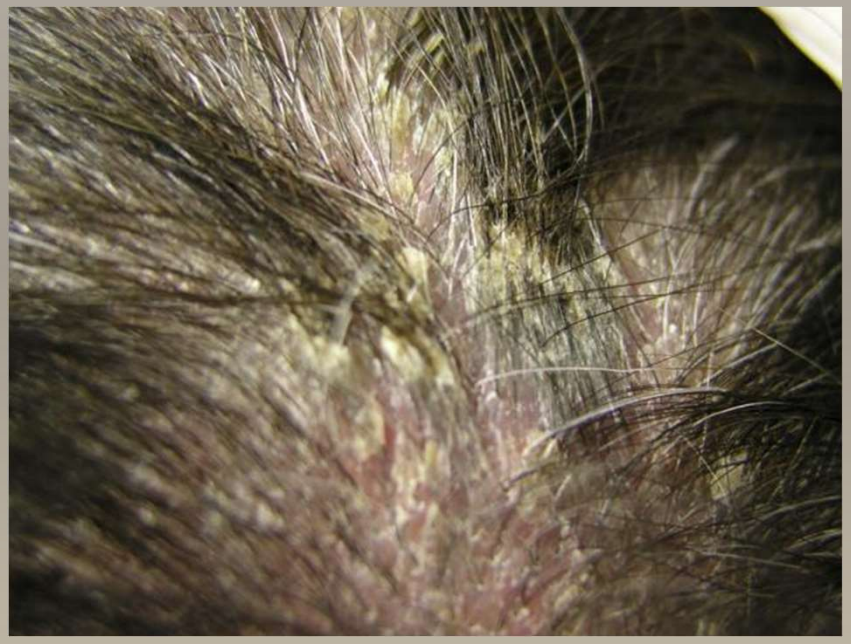
PITYRIASIS AMIANTACEA

- Distinct scalp disorder
- Female predilection: young adults, adolescents, and children
- Clinical diagnosis: Adherent thick silver, gray, or yellow scales which surround and bind down hair tufts. Scale attached to hair shaft and scalp
- Fungal cultures usually negative
- Staph most common

Photo Courtesy Visual DX

PITYRIASIS AMENTACIA TREATMENT

- Keratolytic shampoos: 2% salicylic acid shampoo
- Urea 20% or 40% cream
- Topical steroids in oil base (fluocinolone oil 0.01%)
- Antibiotics if cultures positive



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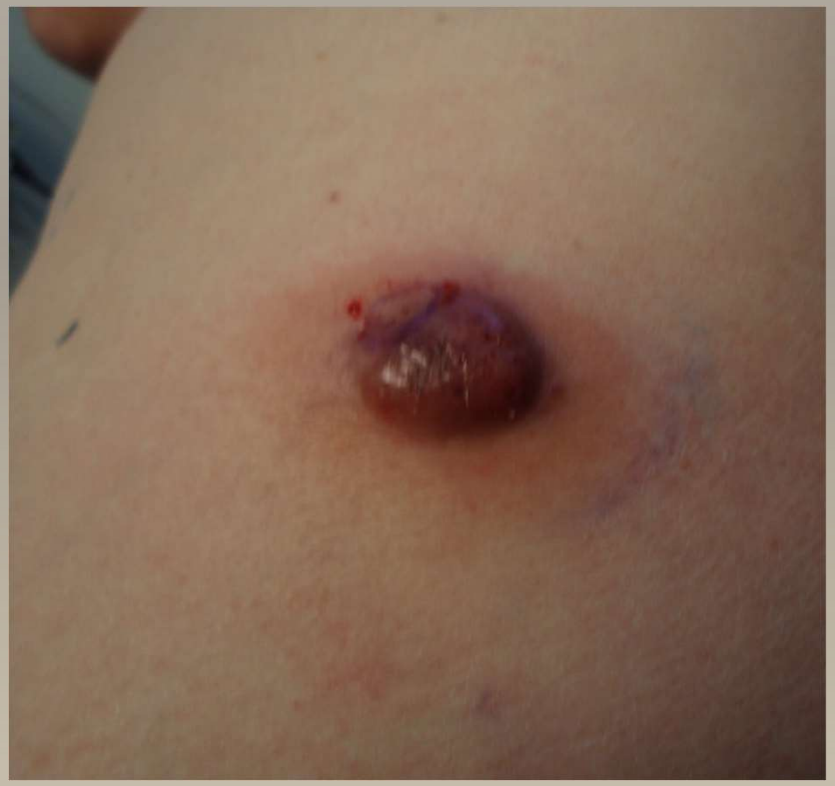
80 YEAR OLD MALE

- Developed friable nodule on R lateral trunk 6 weeks ago
- Occasionally tender
- Bleeds
- PMH: hypertension, hypercholesterolemia, lung CA diagnosed 5 years ago
- Cutaneous metastases usually poor prognosis: ~75% one year mortality



DIFFERENTIAL DIAGNOSIS TESTS AND PEARLS

- Squamous cell carcinoma
- Melanoma
- Leukemia cutis
- Lymphoma\Kaposi sarcoma
- Extramammary Paget disease
- Sarcoidosis

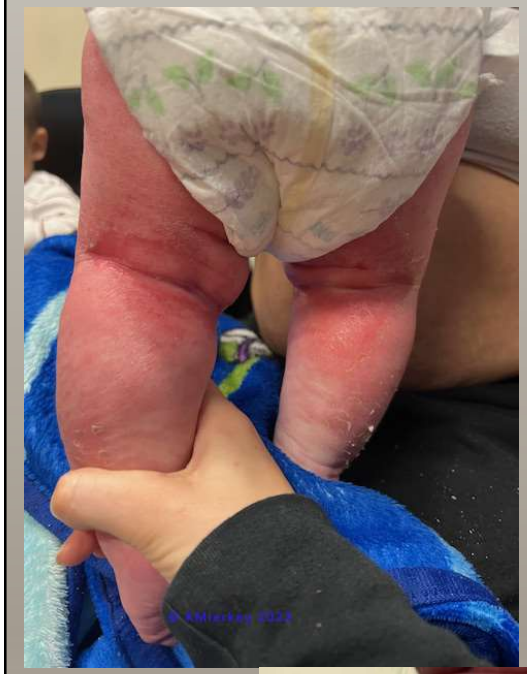
- Biopsy: Caution: have very low threshold for biopsy on skin nodule or tumor that is atypical for known dermatologic disorders, esp in elderly and those with history of carcinoma
- Histologic exam of biopsied skin metastasis may indicate site of previous undetected tumor
- Involvement of medical and/or surgical oncology

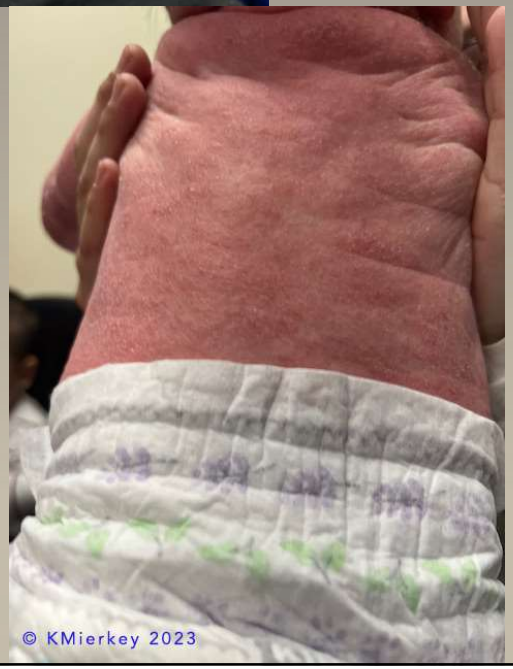
PEARLS: PRIMARY MALIGNANCIES OFTEN HAVE CHARACTERISTIC PRESENTATION IN THE SKIN

- Breast: pink nodules most common presentation
- Melanoma: Hyperpigmented papule or nodule most common presentation
- Lung: Pink or violaceus nodules on the chest most common presentation
- Renal Cell Carcinoma: Single nodule appears on scalp; tendency to bleed
- Metastases from breast, lung, genitourinary most common on scalp
- GI tract carcinoma most common on skin of the abdominal wall
- Sister Mary Joseph nodule: metastatic carcinoma to umbilicus from intraabdominal carcinoma; often easier to palpate
- Patient history of malignancy raises index of suspicion for metastasis

3 MONTH OLD MALE

RASH X 1 WEEK





Assessment: atopic dermatitis with secondary prob. Bacterial infection

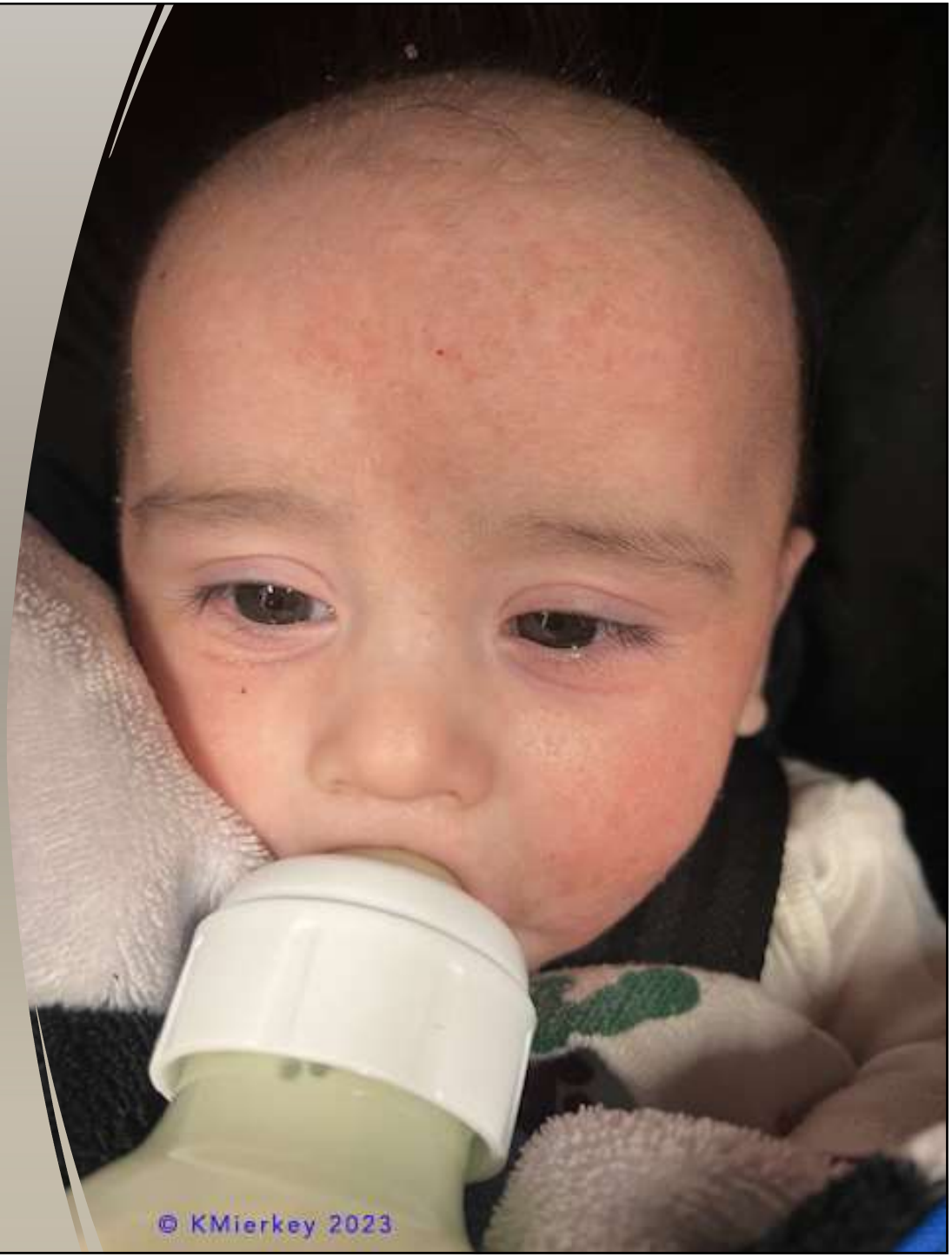
Plan: culture pustules on soles of feet

- Tub soaks bid, lukewarm water, Cetaphil or CeraVe cleanser
- Triamcinalone 0.025% bid to red areas
- Mupirocen bid to infected areas
- Nystatin oint qid to groin at diaper changes
- Cephalexin 250mg 3.2 ml po bid x 7 days
- CeraVe lotion/cream, Cetaphil lotion/cream, Vaseline, or Aquaphor immediately after baths bid
- Wet-dry wraps x 30-6- minutes daily before sleep; do not sleep in wet wraps

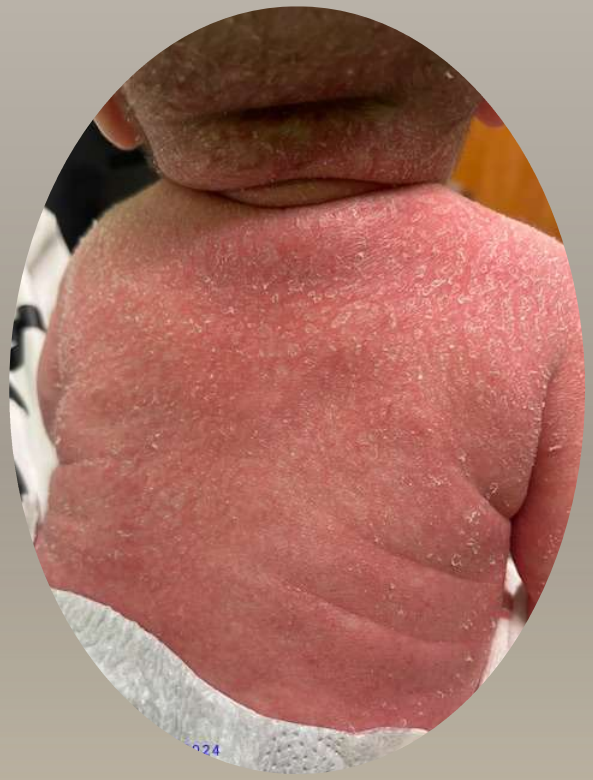
Re-check 1 week

1 WEEK FOLLOW-UP

- Plan: culture pustules on soles of feet
  - Tub soaks daily
  - CeraVe lotion/cream, Cetaphil lotion/cream, Vaseline, or Aquaphor immediately after baths bid



3 weeks later



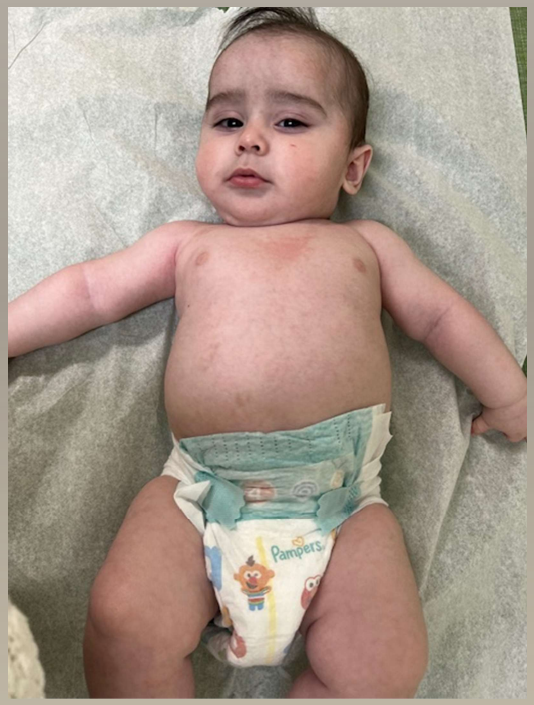
- Mom returns with AD flare over entire body. Baby fussy, poor sleep; mom reports moisturizers not applied daily, baths 2-3 x/week; eating well; requests consultation with Children's Hospital, wants rash to go away for good

CONSULTATION

- Explained chronicity of atopic dermatitis
- Explained treatment options for flare
- Explained in detail maintenance routine; emphasize importance of moisturizers bid, tub soaks; explained skin is “thirsty”
- Cephalexin 250 mg/ 3.1 ml bid x 7 days
- Re-start Triamcinalone 0.025% bid, avoid face, armpit and groin
- Referral to Children’s Hospital Dermatology, appt. 1/16/2024

- ***Consultation note:
  - Discussed with PCP this baby is good candidate for Crisaborale (approved 3 months and up)
  - Families take extra time to understand chronicity of AD

6 MONTH CHECK



Medication	Mechanism of Action	Approved Age	Pediatric Dosing
Pimecrolimus (Elidel) cream 1%	Calcineurin Inhibitor Molecular weight: 810	>= 2 years	Apply to affected skin twice daily; rub in completely Second line therapy, short-term, non-continuous use; avoid occlusive dressings
Tacrolimus (Protopic) ointment 0.03% or 0.1%	Calcineurin Inhibitor Molecular weight 822	0.03%: 2-15 years 0.1%: >15 years	Apply to affected areas twice daily, rub in completely Second line therapy, short-term, non-continuous use, avoid occlusive dressings
Crisaborole (Eucrisa) ointment 2%	Phosphodiesterase-4 (PDE-4) Inhibitor Suppress release of TNFα, interleukin-12 Molecular weight 251	>= 3 months	Apply to affected areas twice daily, rub in completely
Ruxolitinib (Opzelura) cream 1.5%	Janus kinase (JAK) Inhibitor Ease itching and inflammation Molecular weight 306	>= 12 years	Apply to affected areas twice daily, rub in completely (up to 20% BSA for up to 8 weeks) Short-term, non-continuous use

SYSTEMIC THERAPIES FOR MODERATE-TO-SEVERE AD

Medication	Mechanism	Administration	Pediatric dosing
Dupilumab	IL-4R inhibitor	SC injection	5 to <15 kg: 200 mg every 4 weeks 15 to <30 kg: 300 mg every 4 weeks 30 to <60 kg: 200 mg every 2 weeks ≥60 kg: 300 mg every 2 weeks *[has loading dose for ages ≥ 6 yrs]*
Tralokinumab	IL-13 inhibitor	SC injection	150 mg every 2 weeks *[has loading dose]*
Abrocitinib	JAK1 inhibitor	Oral	100-200 mg once daily
Upadacitinib	JAK1 inhibitor	Oral	15-30 mg once daily

Courtesy Joy Wan, MD

SYSTEMIC TREATMENTS FOR AD

The Old…

- Traditional systemics*
  - Methotrexate
  - Cyclosporine
    - Approved for ≥ 16 y.o. in Europe, Australia, Japan
  - Azathioprine
  - Mycophenolate mofetil

*None are FDA-approved for AD

…and the New

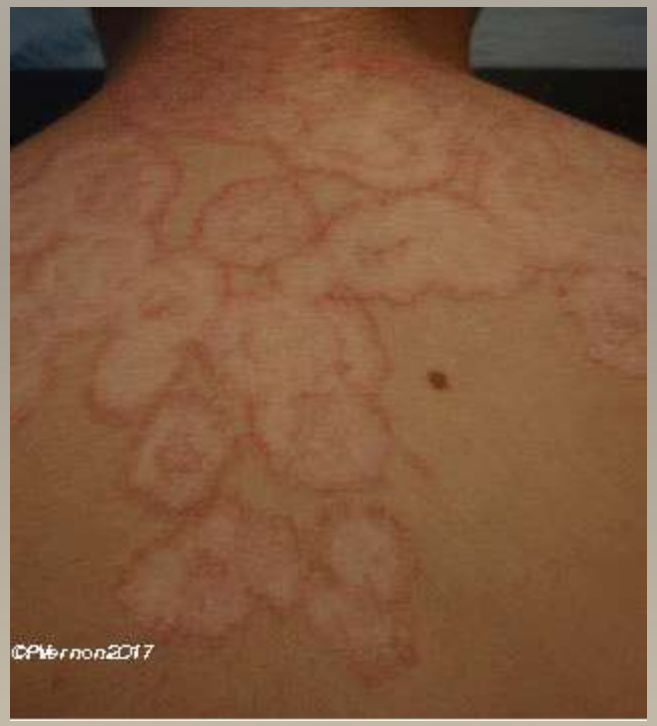
- Biologics
  - Dupilumab (anti-IL-4Rα)[a]
  - Tralokinumab (anti-IL-13)[b]
- Oral JAK inhibitors
  - Abrocitinib (JAK1)[b]
  - Upadacitinib (JAK1)[b]
  - Baricitinib (JAK1/2)[c]

[a] FDA-approved for ≥ 6 months old
[b] FDA-approved for ≥ 12 years old
[c] Not FDA-approved but EMA-approved for ≥ 2 years old

Courtesy Joy Wan, MD

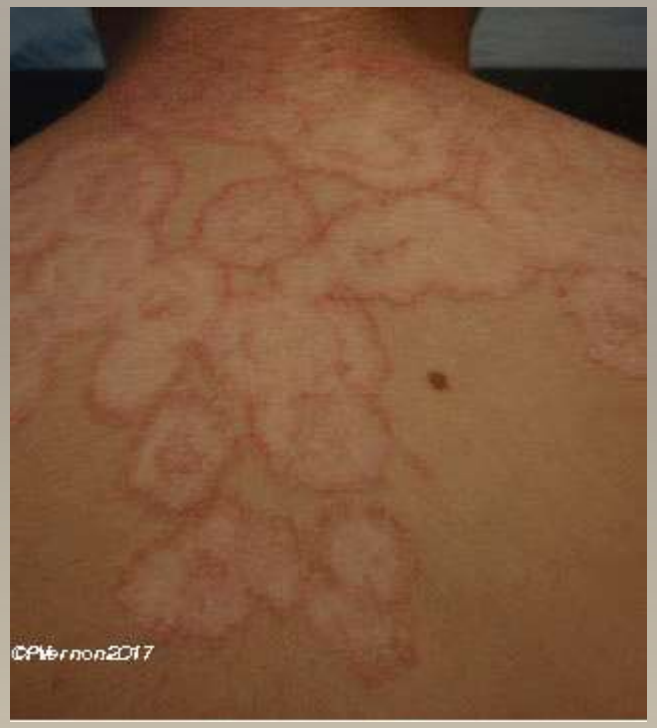
58 YEAR OLD FEMALE

- Annular plaques on upper back
- Red borders with scale
- Central clearing
- Recent vacation with sun exposure



DIFFERENTIAL

- Tinea corporis
- Nummular Dermatitis
- Psoriasis
- Sarcoidosis
- Lupus
- Syphilis
- Drug eruption
- Photodermatitis

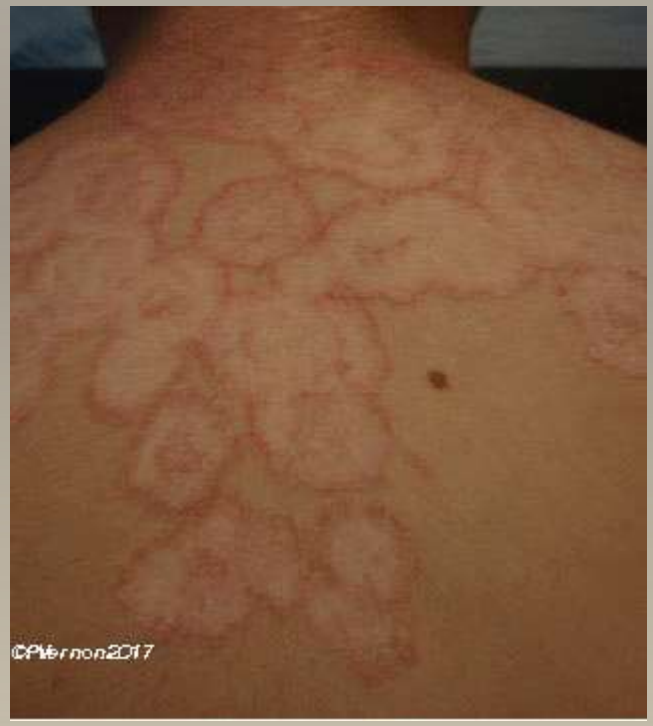


DIAGNOSTICS

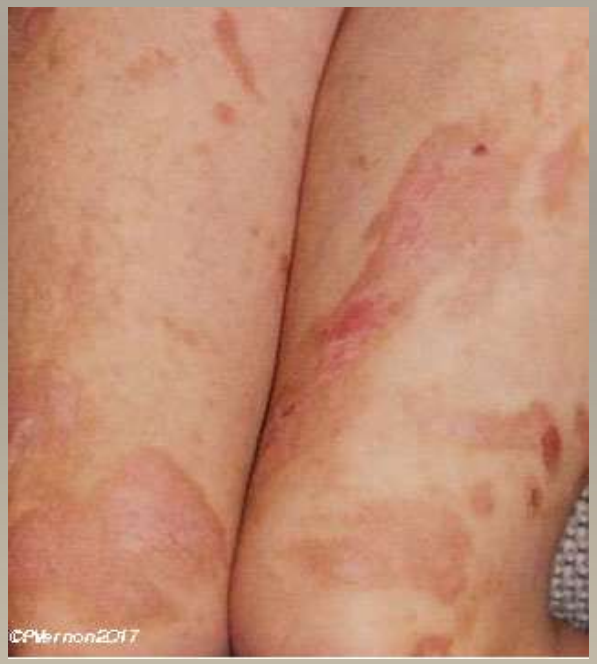
- ANA, CBC with Differential, ESR (sedimentation rate)
- UA
- Biopsy
  - Hematoxylin and eosin staining (H & E)
  - Direct immunofluorescnce (DIF) on lesional and peri-lesional skin

LUPUS MANAGEMENT

- **Refer to rheumatology and dermatology for co-management**
- Sunscreen
- Topical and intralesional steroids
- Oral steroids
- Azathioprine
- Cyclophosphamide
- Cyclosporine
- Plaquenil
- Mycophenolate
- Methotrexate
- Benlysta



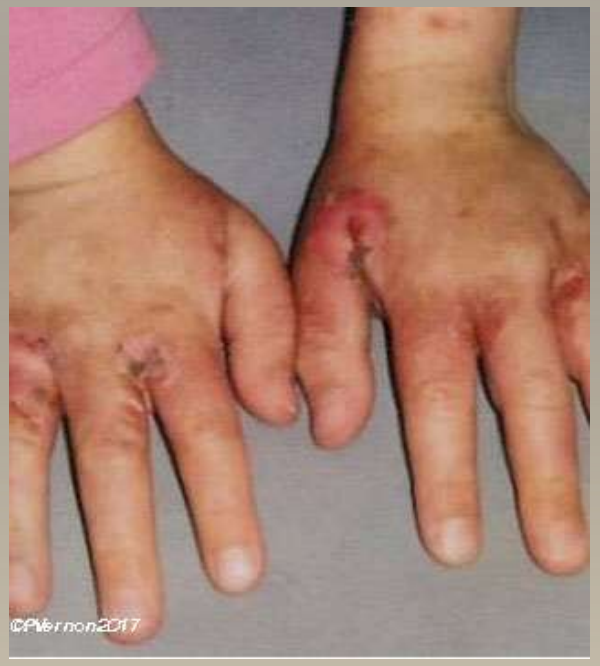
10 YEAR OLD FEMALE



- Developed blisters and itching on legs and hands while on vacation
- Lesions have not spread
- Slight itching

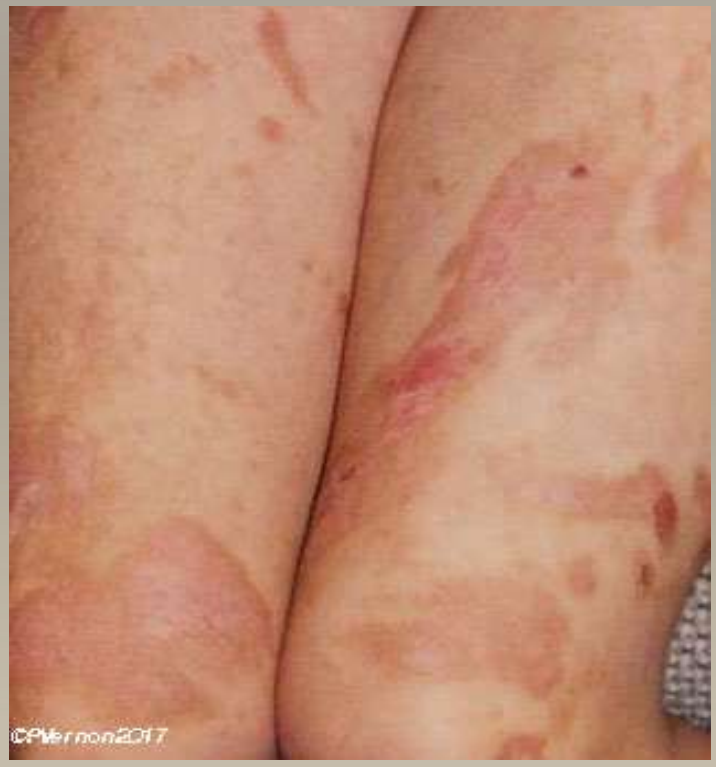
DIFFERENTIAL DIAGNOSIS

- Atopic Dermatitis
- Burns
- Contact Dermatitis
- Child Abuse
- Phytophoto Dermatitis



PHYTOPHOTO DERMATITIS

- Redness and blisters in bizarre shapes
- Exposure to plants, especially those in celery, citrus, and grass family
- Plants produce psoralen on the skin
- Exposure to sunlight produces photodermatitis with blister formation, followed by intense stimulation of melanin



PHYTOPHOTO DERMATITIS CAUSES

- Citrus and Lime found in drinks and food
  - Figs
  - Celery
  - Lemon and Lime oil
  - Queen Anne's lace
  - Giant Russian hogweed
- Bergapten
  - Component of bergamot oil
  - Found in cosmetics, perfumes, lotions, sunscreens and household products

DIAGNOSTICS

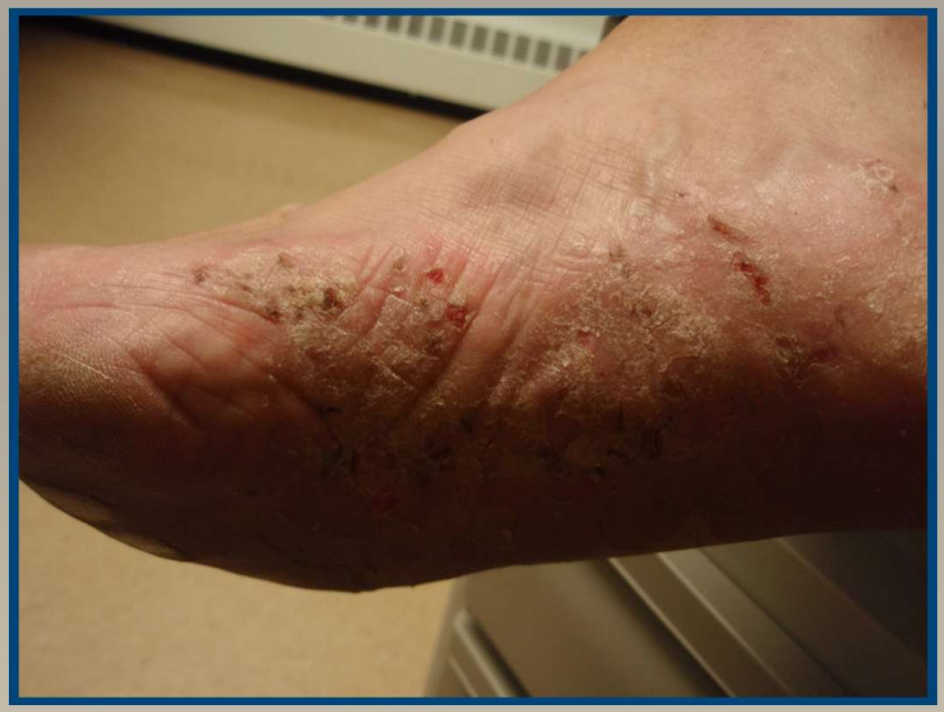
- Clinical suspicion
- Photopatch test if photoallergy suspected:
  - Occlusive application of test chemical(s)
  - Irradiation with UV light at several intervals
  - Phototoxicity: controls positive
  - Photoallergy: controls negative

TREATMENT

- Remove offending substance
- No treatment necessary if asymptomatic
- Topical corticosteroids if pruritic
- Analgesics
- Sunscreen
- Treat resulting PIH

58 YEAR OLD FEMALE

- Thick scale
- Fissures and Bleeding
- Only on the soles of feet
- Previously treated with topical anti-fungal creams and topical steroids
- Long-standing history



DIFFERENTIAL

- Tinea Pedis
- Atopic Dermatitis
- Contact Dermatitis
- Psoriasis

PSORIASIS

- 1-3% of the population
- 25-45& after age ten
- one-third of adults with psoriasis developed before age 16
- Both sexes affected equally in adults
- Familial tendency
- Up to 42% have psoriatic arthritis

PHYSIOLOGY

- Chronic, inflammatory, systemic disease
- Epidermis thickened, silver-white scale
- Transit time from basal cell layer to surface of skin in 3-4 days, compared to normal cell transit time of 20-28 days
- Itching variable

PATHOPHYSIOLOGY

- T-cell mediated disorder
- Over-active inflammatory response
- Tumor necrosis factor *a* levels elevated in the skin and synovium of patients with psoriasis

TREATMENT OPTIONS

- Light therapy
  - Ultraviolet B (UVB)
  - Ultraviolet A (UVA)
  - PUVA (psoralens with UVA)
  - Home UVB
- Adjunct Therapies
  - Topical Steroids
  - Vitamin A and D derivatives
  - Topical calcineurin inhibitors
  - Intralesional steroid injections
  - Coal Tar (Scytera®)
- Systemic Drugs
  - Acitretin (Soriatane®)
  - Methotrexate (MTX)
  - Cyclosporine (CsA)
  - Apremilast
  - Biologic Medications

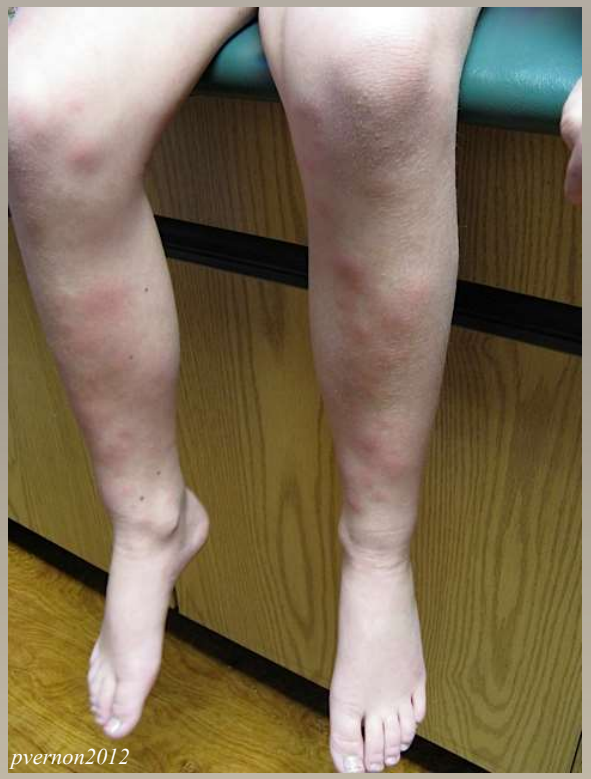
BIOLOGICS

- TNF alpha inhibitors
  - Adalimumab
  - Certolizumab
    - Preferred in pregnancy
  - Etanercept
  - Infliximab (infusion)
- IL-17 inhibitors
  - Brodalumab (REMS monitoring)
  - Ixekizumab
  - Secukinumab
- IL-12/23 inhibitor
  - Ustekinumab (weight-based dosing)
- IL-23
  - Guselkumab
  - Tildrakizumab
  - Rizankizumab

Aldredge, L. (2021) "Psoriasis." *Dermatology for Advanced Practice Clinicians.* Bobonich, M and Nolen, eds. (2nd ed). Wolters Kluwer.
Armstrong, A., et al. (2016). "*Treatment targets* for plaque psoriasis". Journal of the American Academy of Dermatology, Volume 76, Issue 2, 290 – 298.
Martin, G. et al (2019). "Recommendations for initiating systemic therapy in patients with psoriasis." *Journal of Clinical and Aesthetic Dermatology*, 12(4): 13-26

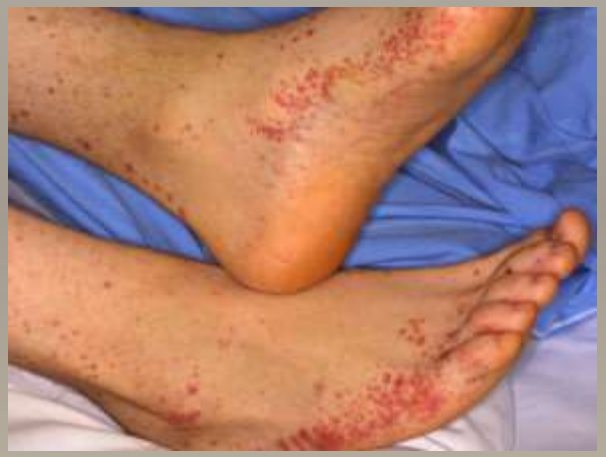
HENOCH-SCHONLEIN PURPURA

- Hypersensitivity vasculitis: mainly in children
- History: URI, 75% group A Strep
- Palpable purpura
- Bowel angina: abdominal pain worse after meals
- Bowel ischemia, bloody diarrhea
- Kidney: hematuria
- Arthritis
- 5% long-term morbidity, renal disease



HSP

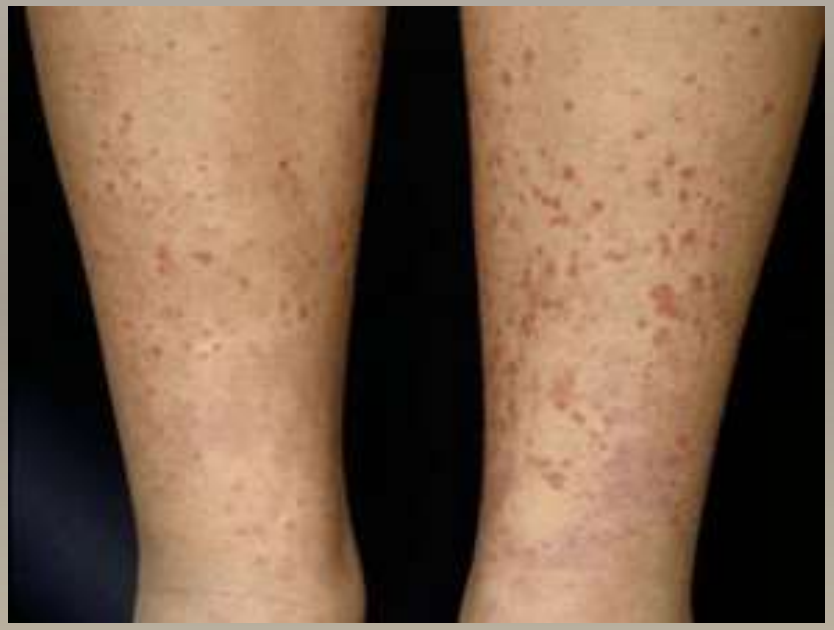
- Ages 2-10
- Palpable purpura legs and buttocks, occasionally arms, face, ears---spares trunk
- Abdominal pain GI bleeding, arthralgia, hematuria, leukocytoclastic vasculitis
- Degree of renal involvement determines prognosis
- Preceded by strep or viral URI infection 1-3 weeks prior
- Usually benign, long-term prognosis excellent



https://dermnetnz.org/assets/Uploads/vascular/s/hsp6__WatermarkedWyJXYXRlcm1hcmtl
.jpg

HSP TREATMENT

- Bed rest, supportive care
- Appropriate antibiotics
- Serial UA
- Corticosteroids debatable: helpful for short periods with GI complications or chronic glomerulonephritis



https://dermnetnz.org/assets/Uploads/vascular/s/hsp4__WatermarkedWyJXYXRlcm1hcmtlZCJd.jpg

MEASLES (RUBEOLA)

- Prodrome: fever, malaise, cough, conjunctivitis. Child appears quite ill
- Koplik's spots: bluish-white elevations on buccal mucosa
- Exanthem: erythematous maculopapular eruption, from scalp to forehead, posterior ears, face, neck, to trunk and extremities. Fades in same progression
- Incubation: 10-12 days

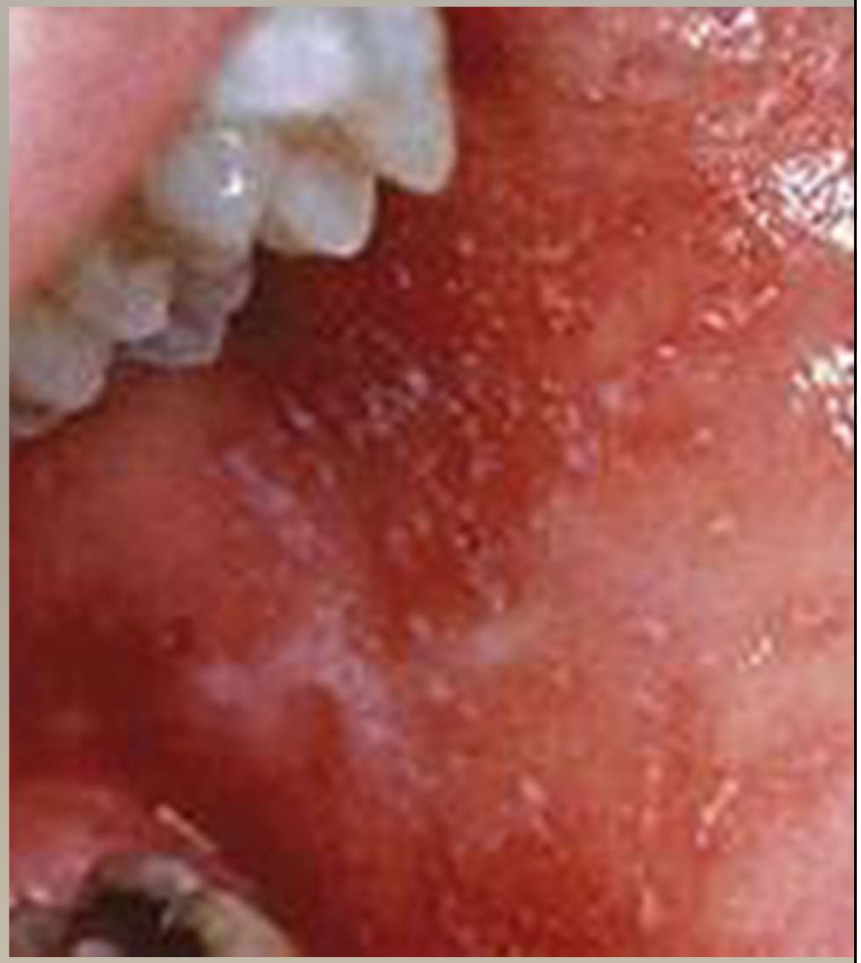


Photo Courtesy Visual DX

MEASLES (RUBEOLA) DIFFERENTIAL DIAGNOSIS

- Other morbilliform eruptions: Rubella, erythema infectiosum, pityriasis rosea, infectious mono
- DRUG
- Papulosquamous disorders: psoriasis, guttate psoriasis

MEASLES: TREATMENT AND PREVENTION

- Symptomatic and supportive
- Appropriate treatment of secondary bacterial infections: otitis media, bronchopneumonia
- IMMUNIZE!

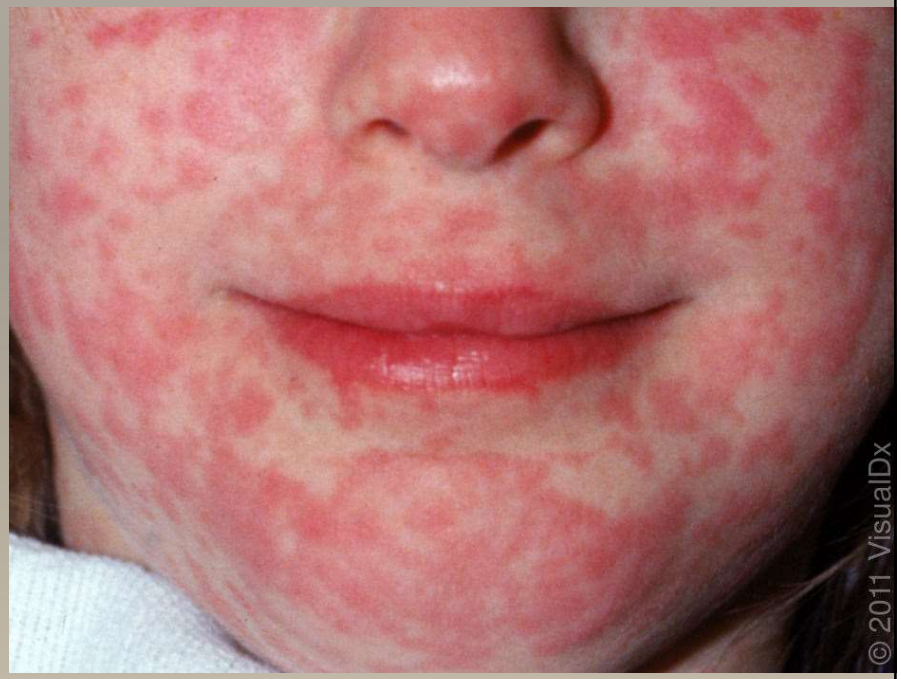


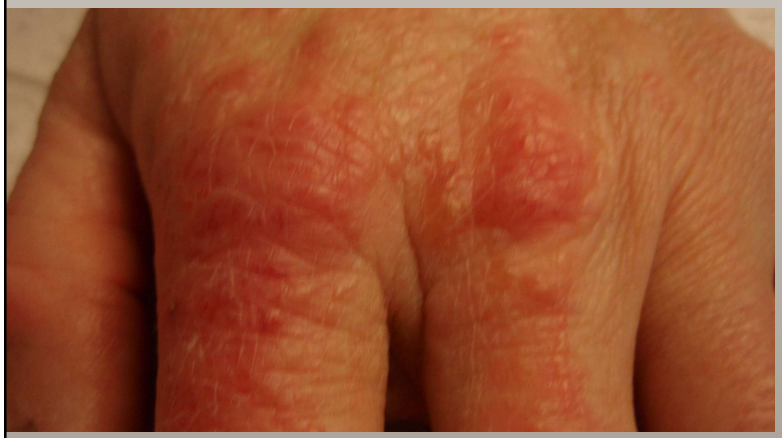
Photo Courtesy Visual DX

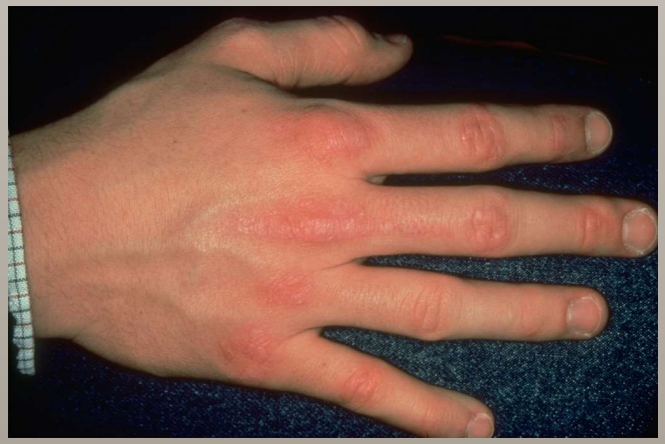
- Those born before 1957 are considered immune
- Those born between 1957-1967 may have been given a killed vaccine and should be re-immunized
- Those born after 1967 should be covered unless parents opted out of vaccinations
- The majority of those who got measles were unvaccinated
- In 2019 there were 1249 reported cases of measles nationally. So far, in 2020, there have been 700 cases reported
- Studies suggest “compelling evidence” that measles affects the immune system for 2-3 years
  - When vaccine is introduced to developing countries, where infectious diseases are high, the reduction in mortality has been up to 80%
  - Children who contracted measles appear to be predisposed to all other infections for several years

- Mina, Michael, et al*: Science, 2/19/2019*

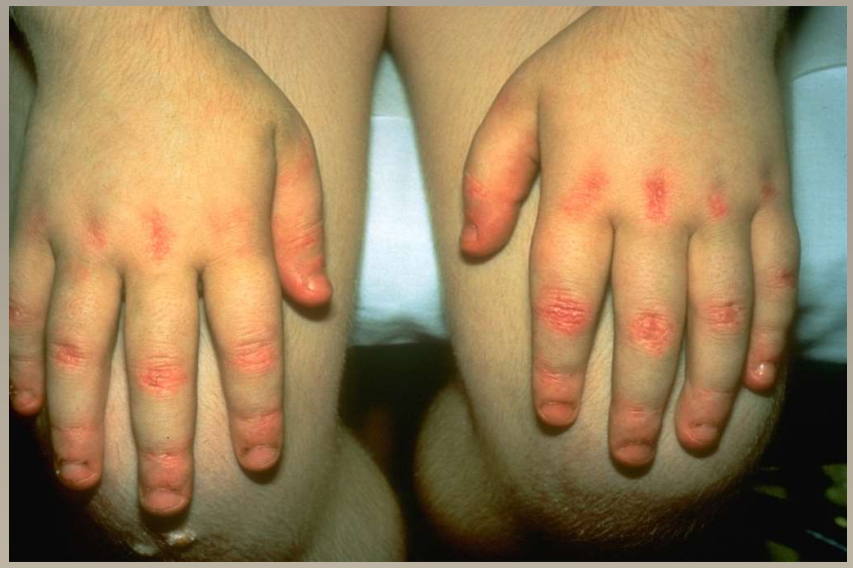
DERMATOMYOSITIS

- Erythema of the cuticles
- Palmar erythema
- Cutaneous calcinosis—generally a favorable prognosis in children

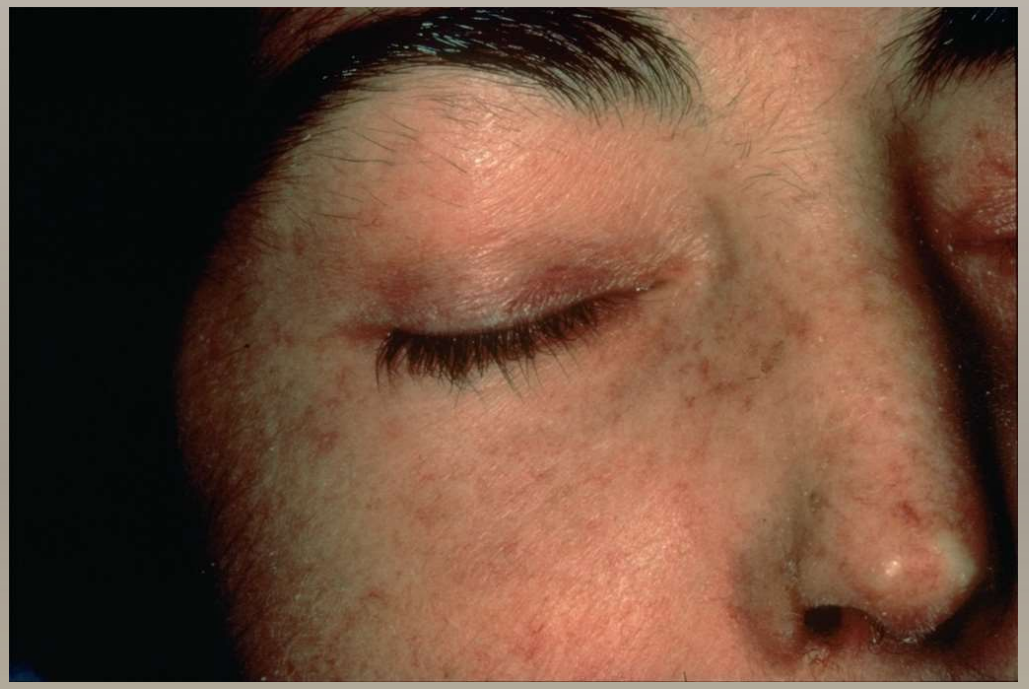




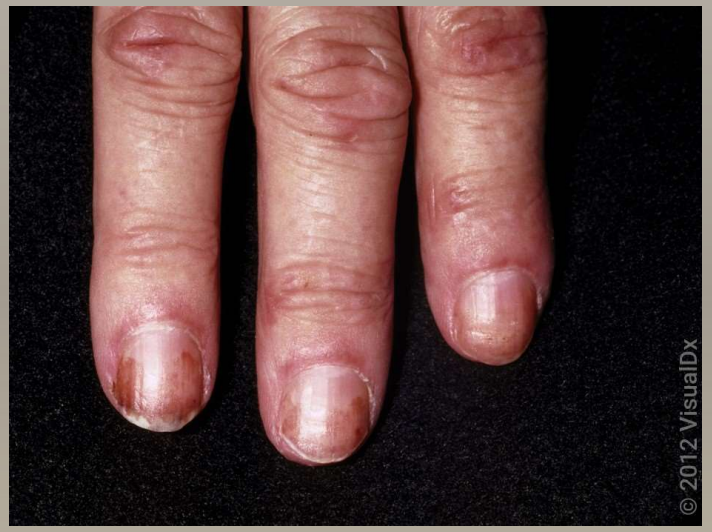
Gottron Papules over joints of hands and fingers



Heliotrope rash: erythema around eyes, especially upper eyelids

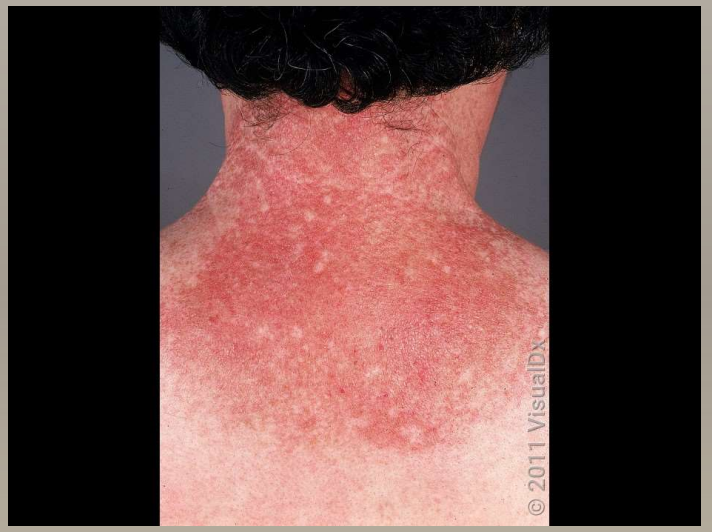


- Autoimmune disease
- Inflammation of skin, muscles, joints, other organs
- Periungual erythema, dilated capillaries with cuticular overgrowth
- 10 years, adults over 40 years
- Female: Male 2:1
- Infections and drug-induced
- Underlying malignancies



DERMATOMYOSITIS

- Photo-exposed areas develop pigmentary changes and telangiectasias
  - “Shawl sign” on shoulders
  - “V” sign on chest



DERMATOMYOSITIS

- Hallmark Heliotrope rash: erythema around eyes, especially upper eyelids

DIAGNOSIS

- Skin biopsy of lesional and perilesional skin
- Muscle biopsy/ MRI
- Serologic: ANA, creatine kinase, SGOT, ALT, LDH, AST, 24-hour urine for creatine
- ECG myocarditis, atrial ventricular irritability, atrioventricular block

X-ray:

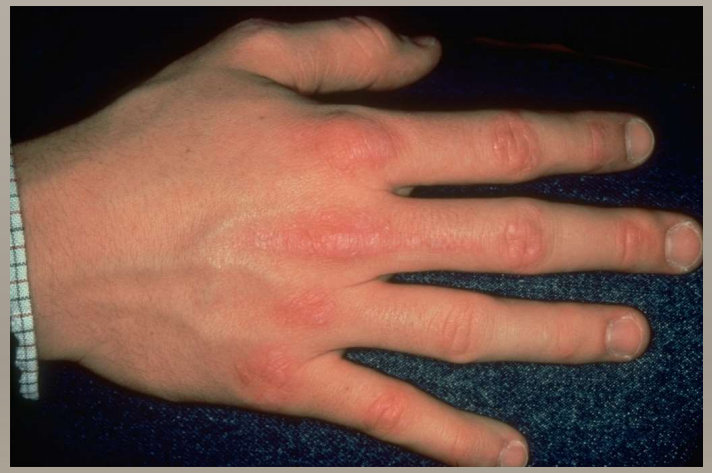
Chest ± interstitial fibrosis.

Esophagus: reduced peristalsis

DERMATOMYOSITIS MANAGEMENT

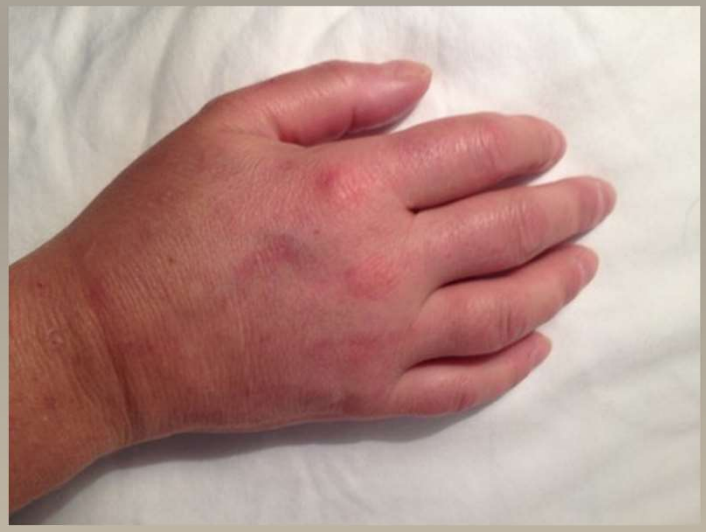
Goal of treatment is to reverse weakness

- Careful evaluation during first 5 years for malignancy
- Pt. education: report new symptoms, photo exposure can exacerbate
- Prednisone. Taper when muscle enzyme levels approach normal. Best combined with azathioprine
- Alternatives: MTX, cyclophosphamide, cyclosporine, TNF agents
- Physical therapy, rest



45 YEAR OLD FEMALE

- Swollen tender joints on hands and elbows, progressively worse through the day
- Low-grade fever, headache and muscle aches, macular lacy rash on trunk



DIFFERENTIAL DIAGNOSIS

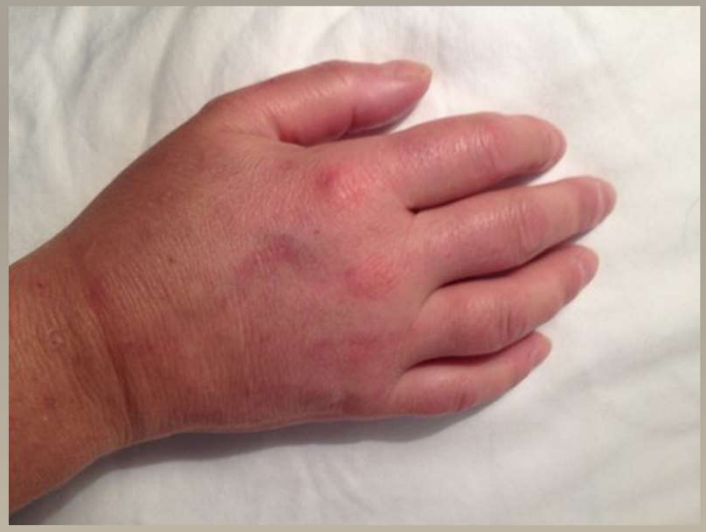
- Allergic-hypersensitivity reaction
- Viral exanthem
- Epstein-Barr Virus
- Hepatitis
- Rheumatologic disorder

5TH DISEASE (ERYTHEMA INFECTIOSUM)

- Clinical presentation
- IgM assays: Enzyme-linked immunosorbent assay (ELISA), radioimmunoassay (RIA)
- CBC
- Maternal alpha-fetoprotein levels for pregnant patients

5TH DISEASE

- More common in children
- Parvovirus B19
- Usually benign, self-limiting
- Oral Analgesics, NSAIDS
- 50% adults have antibodies
- Adults:
  - More common in women
  - Higher risk of developing joint pain
  - Arthralgia lasts 3 weeks or longer
  - Hydrops fetalis and fetal death in first trimester



16 YEAR OLD MALE

- Wart under right first toe
- Previously treated with LN2 by PCP
- OTC home therapies including salicylic acid

Courtesy Visual DX

SUBUNGUAL EXOSTOSIS

Differential Diagnosis

- Subungual fibroma
- Subungual wart
- Osteosarcoma
- Pyogenic granuloma
- Osteochondroma
- Glomus tumor
- Subungual exostosis

Treatment

- Surgical excision
- Referral to Orthopedics or Podiatry

DIAGNOSTICS

Diagnostics

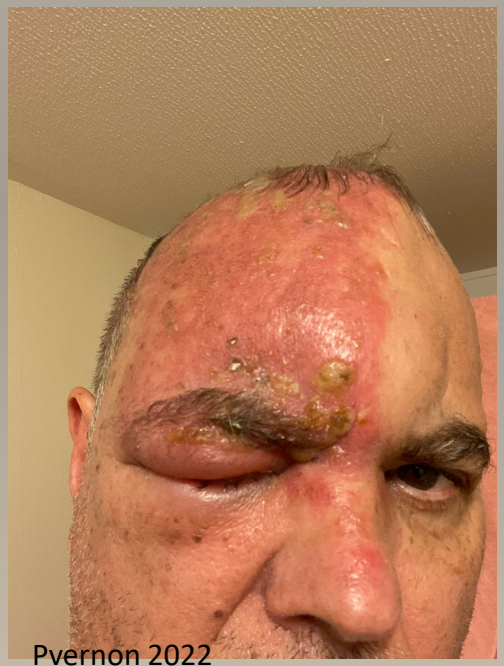
- X-ray
- Biopsy/Excision

Diagnosis

- Subungual exostosis: benign osteocartilaginous proliferation of normal bone or calcified cartilage of distal phalanx
- Most common in R great toe (80%)
- Usually painless, but occasionally tender
- Pearl: may show porcelain white hue with telangiectasia on surface

55 YEAR OLD MALE

- 5 day history of dysesthesias of forehead and brow
- Fatigue
- Eye pain
- Developed unilateral vesicular exanthem on day 5 involving scalp, forehead, ocular area
- Nose and lower face not involved



Pvernon 2022

DIFFERENTIAL DIAGNOSIS

- HSV keratitis
- Corneal erosion
- Herpes zoster opthalmicus

DIAGNOSTICS

- **History**
- Slit lamp examination
- Choice testing: Polymerase chain reaction (PCR) testing
- Tzanck smear, direct fluorescent antibody (DFA) testing, and viral culture have lower degree of sensitivity
- Skin biopsy: may also be submitted for PCR

THERAPEUTICS

- Oral antiviral medications
- IV antiviral medications for immunocompromised
- Ophthalmic antibiotic ointment
- Ophthalmology consult
- Gabapentin 300-500 mg for post-herpetic neuralgia
- Prednisone 40mg x 5 days, 20 mg x 5 days, 10 mg x 5 days

- ***CDC recommends new zoster vaccine Shingrix in patients age 50 and over; patients previously vaccinated with Zostavax should be revaccinated with Shingrix

SEQUELAE

- Post-herpetic neuralgia
- Ocular hypertension
- Glaucoma
- Cataract
- Progressive corneal scarring

12 YEAR OLD FEMALE

- Multiple warts on both hands
- Embarrassed
- Multiple OTC treatments
- Laser treatments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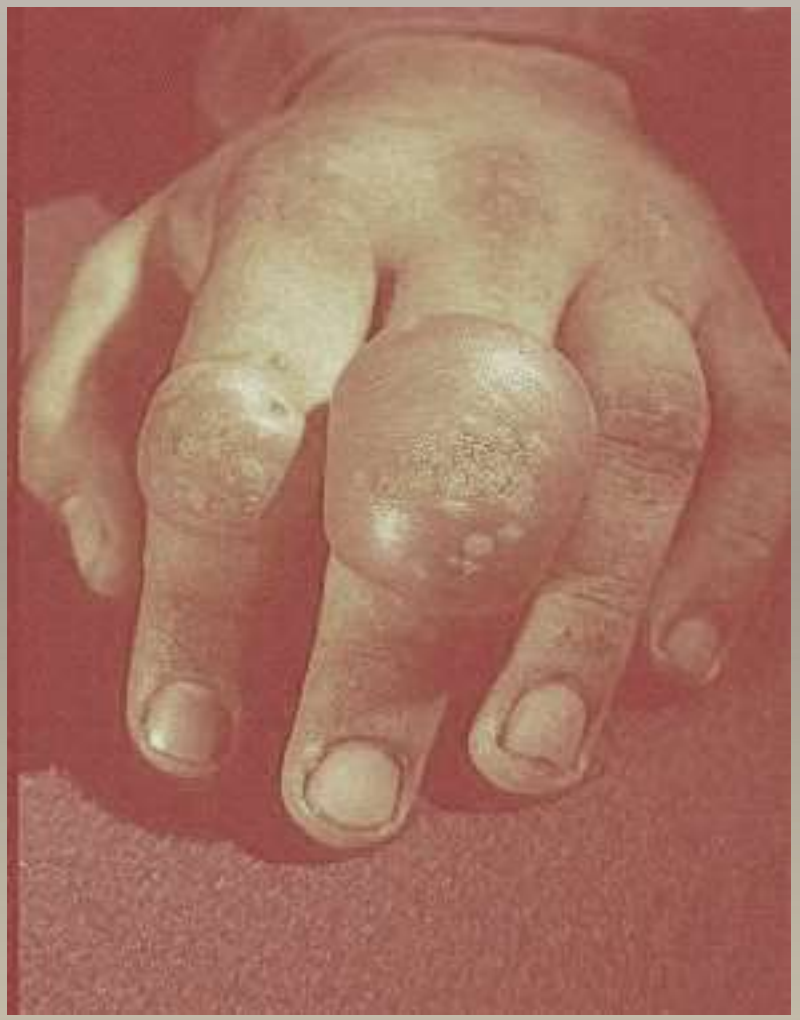
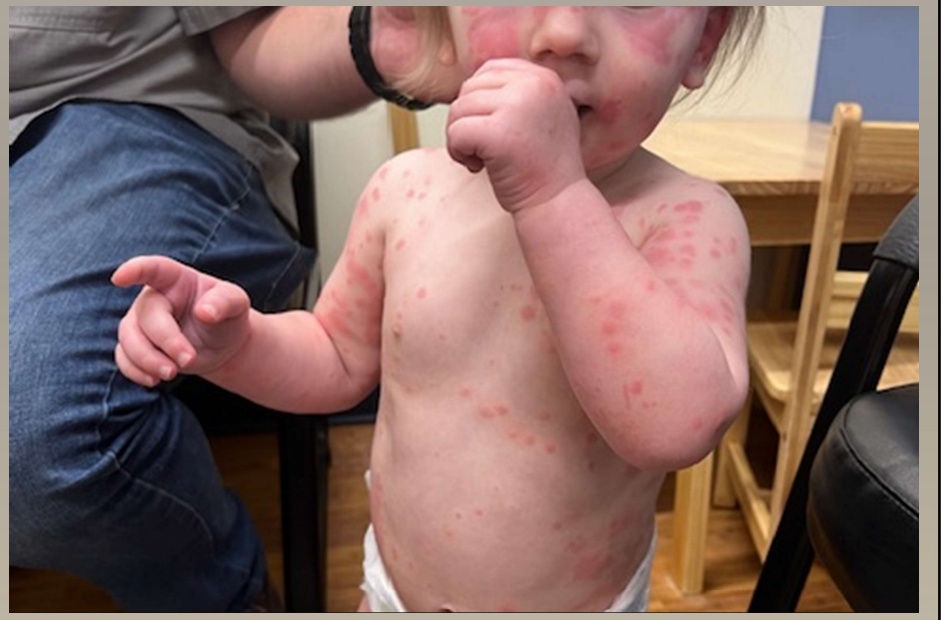


WARTS TREATMENT

- Cryotherapy
- Cantherone
- Curette excision
- Laser
- Electrocautery
- Podophylin
- Bleomycin
- Candida
- Cimetedine
- Salicylic acid
- Condylox
- Aldera
- Tretinoin
- Tazoratine
- OTC

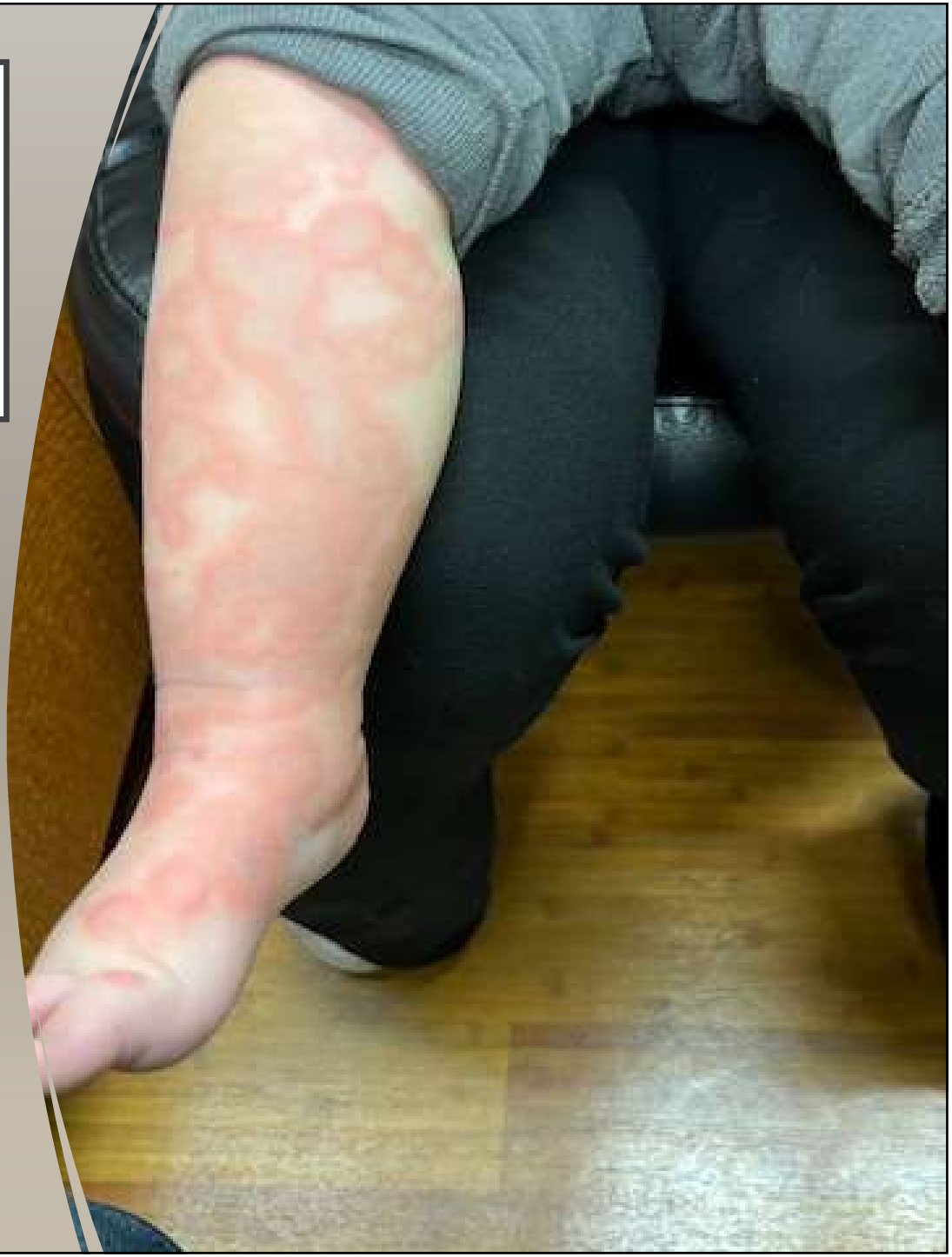
18 MONTH OLD FEMALE

- Fever 101F
- Runny nose, cough
- Just finished Amox for OM; irregular use; gave some this AM
- Rash started yesterday



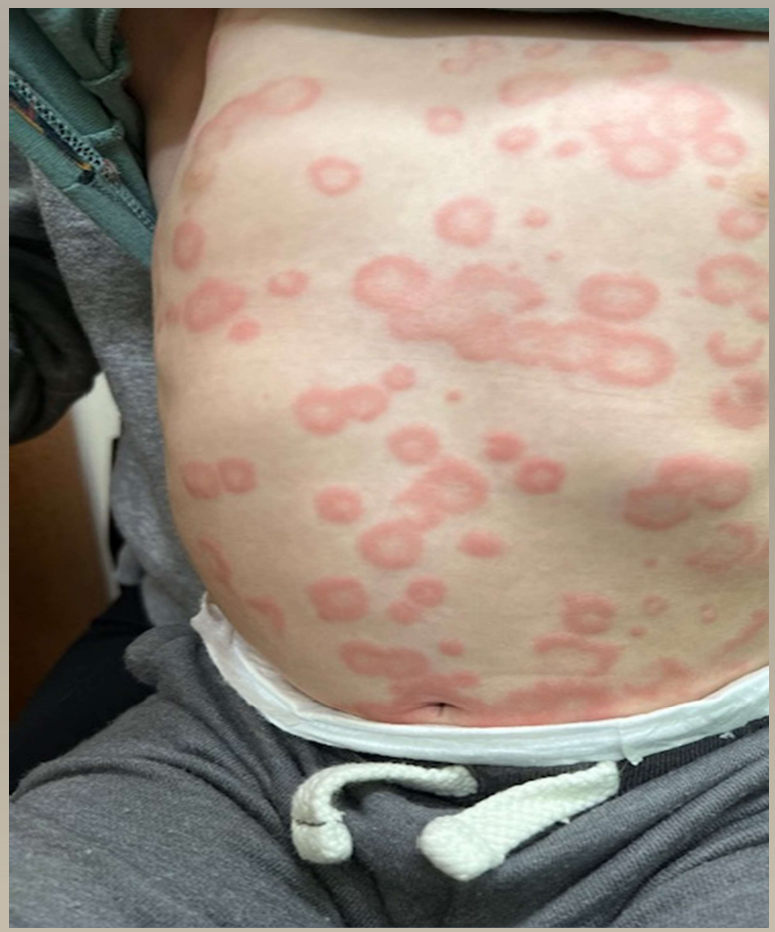
DIFFERENTIAL DIAGNOSIS

- Stevens-Johnson
- Urticaria multiforme
- Erythema multiforme
- Erythema annulare centrifugum



ERYTHEMA MULTIFORME

- Self-limited hypersensitivity reaction of skin & mucous membranes
- Fixed lesions
- Concentric color change (target lesions

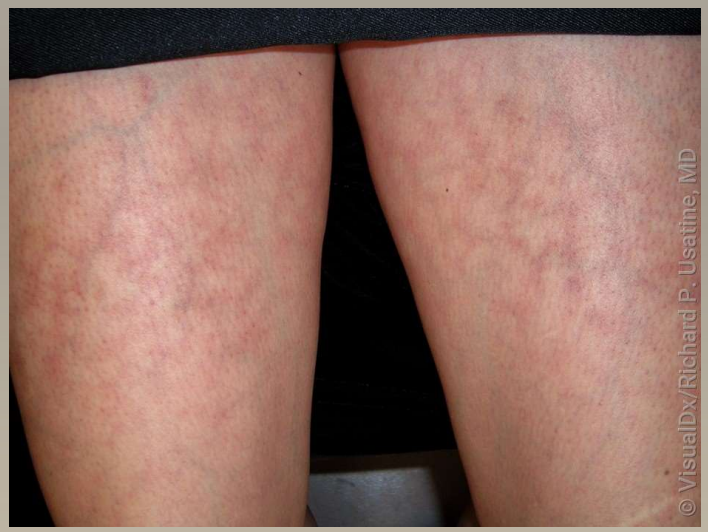


ERYTHEMA MULTIFORME TREATMENT

- Treat secondary lesions
- Self-limited
- Symptomatic treatment: cool compresses, NSAIDs, Oral antihistamines
- Viscous lidocaine/ diphenhydramine for oral ulcers
- Topical corticosteroids for severe itching

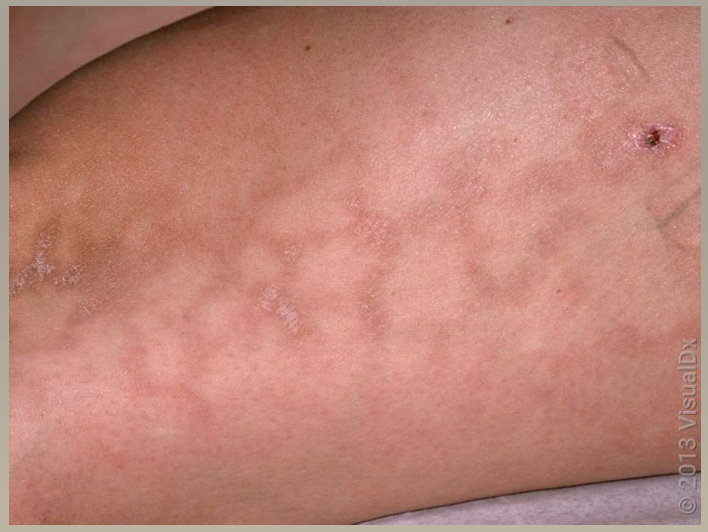
16 YEAR OLD FEMALE

- Reticulated macular eruption on thighs
- “Redness from fire”
- Hyperpigmentation from prolonged exposure to heat
- Pruritus, burning
- Repeated/prolonged exposure may lead to hyperpigmentation
- Females>Males



ERYTHEMA AB IGNE TREATMENT

- Remove heat
- Cool Compresses
- Sunscreen
- Pt education



INTERESTED IN DERMATOLOGY?

Regis University Post-master NP Dermatology Fellowship

Remote 3 Semesters

One weekend on-site procedures workshop

Applications now being taken

INTERNET RESOURCES

- American Academy of Dermatology, www.aad.org
- American Academy of Pediatrics, www.aap.org
- American Lyme disease Foundation, www.aldf.com
- Centers for Disease Control and Prevention, www.cddc.gov
- DermNetNZ, www.dermnetnz.org
- Mayo Clinic: diseases and conditions, www.mayoclinic.com/health/DiseasesIndex
- Medscape:dermatology; http://emedicine.medscape.com
- National Eczema Association, www.nationaleczema.org
- National Collegiate Athletic Association
- www.ncaa.org
- National Federation of High School Sports
- https://www.nfhs.org/
- UpToDate
- VisualDx