Paging Dermatology
Rural Rounds

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Feb 10th, 2022

Disclosures

Speaking Engagements/Honoraria:

Bausch Health, Pfizer, Galderma, AbbVie, LEO Pharma, CeraVe L'Oreal

Consulting Fees:

Novartis, AbbVie, Bausch Health, Pfizer, Sun Parma, Janssen, UCB Canada

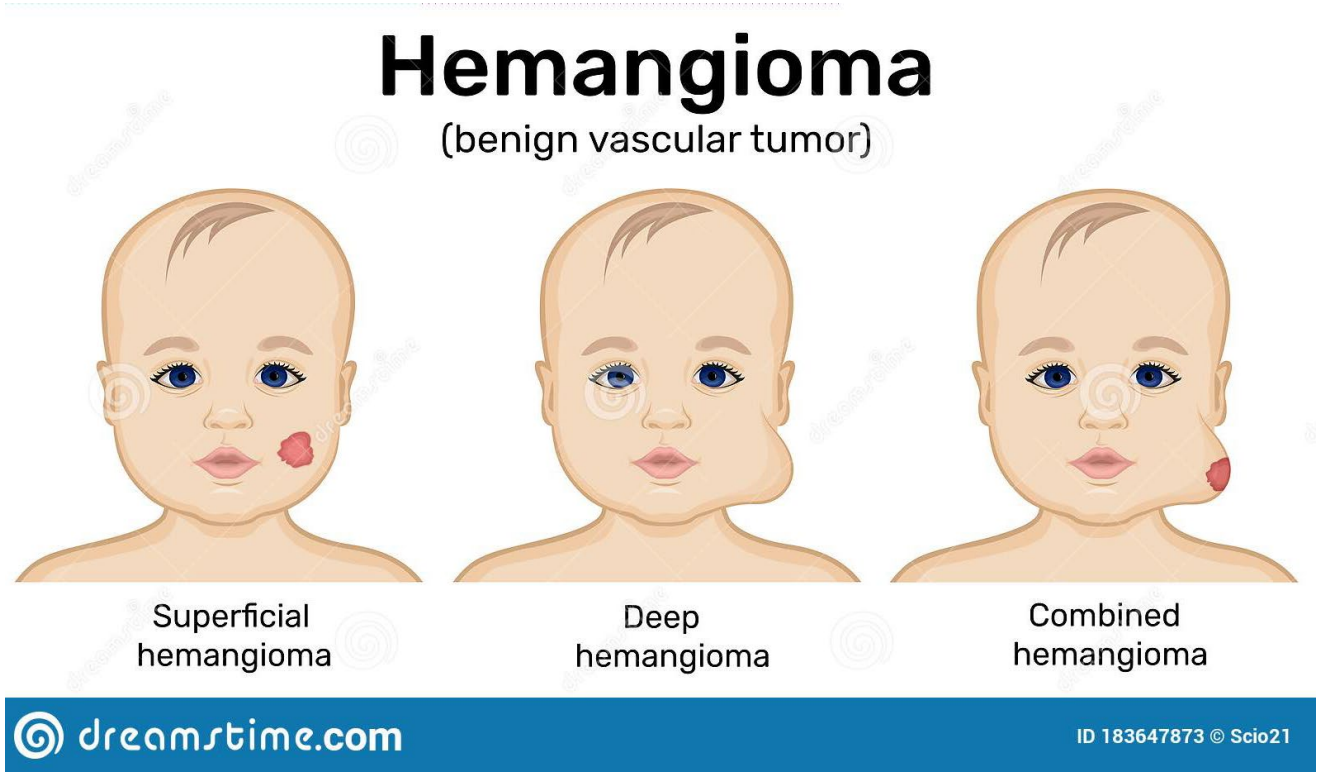
Mitigation of Bias

Relationships do not affect choices in developing content

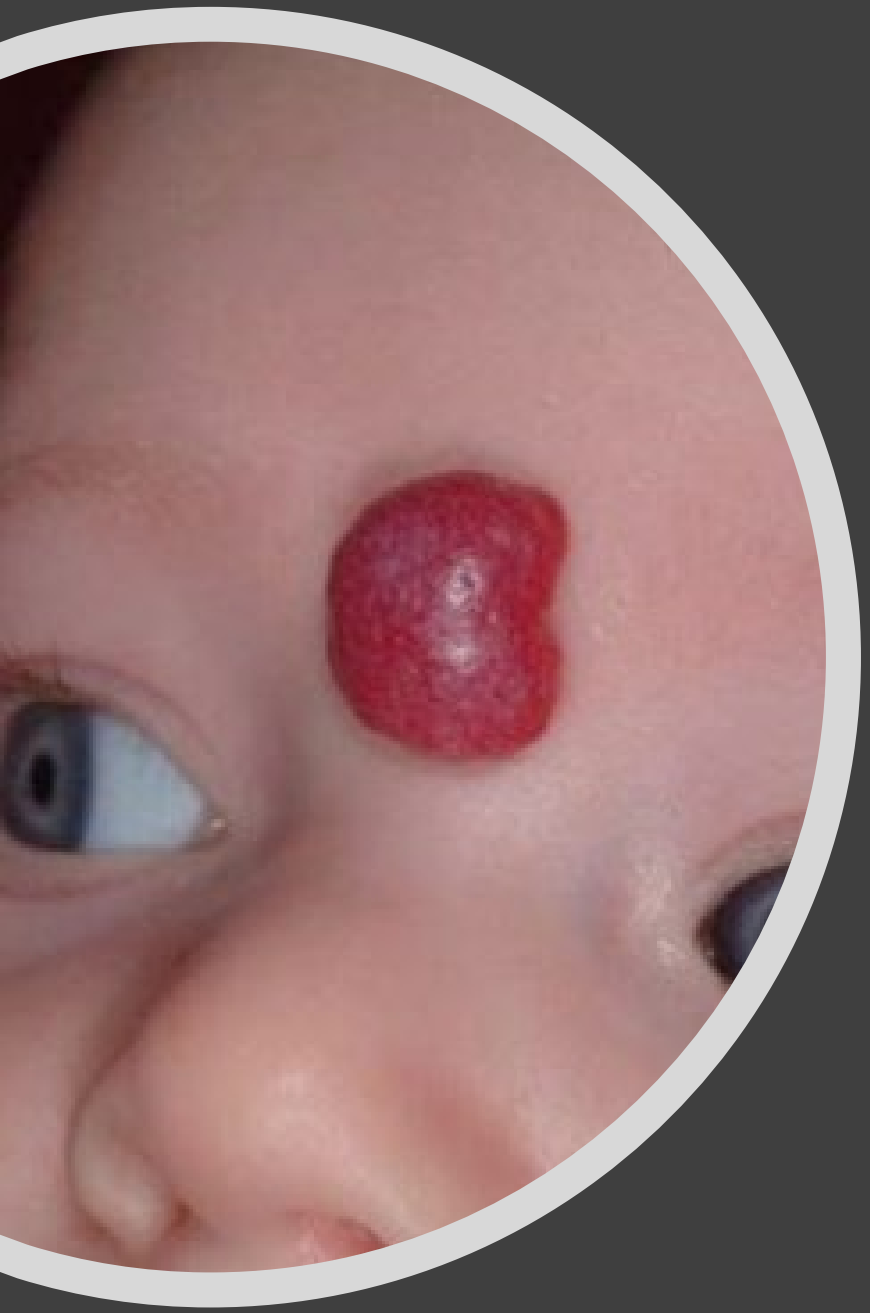
Objectives

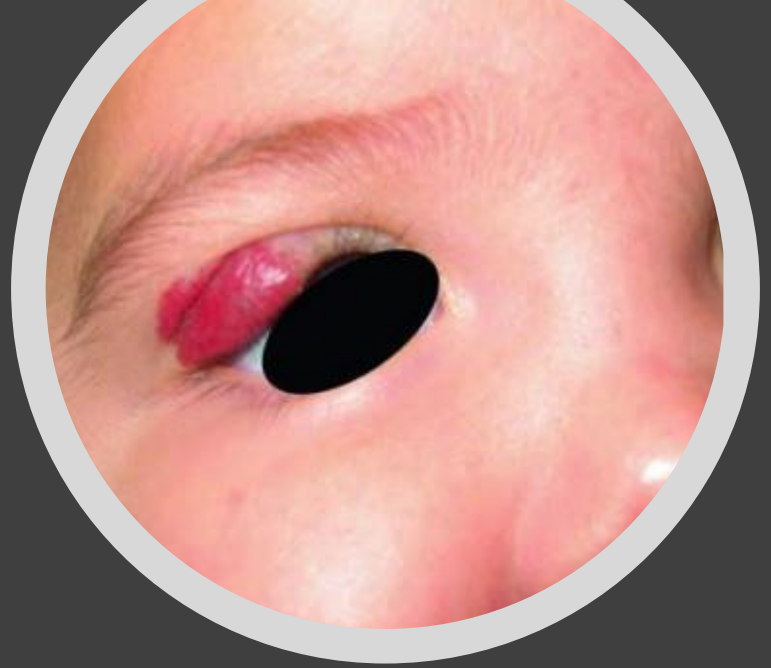
- Infantile hemagiomas
- Infectious mucositis
- Impetigo
- Staph Scalded Skin Syndrome
- Eczema herpeticum
- Horrible Eczema
- Pyogenic granuloma
- Outside things (bites, phytophoto, contact derm)

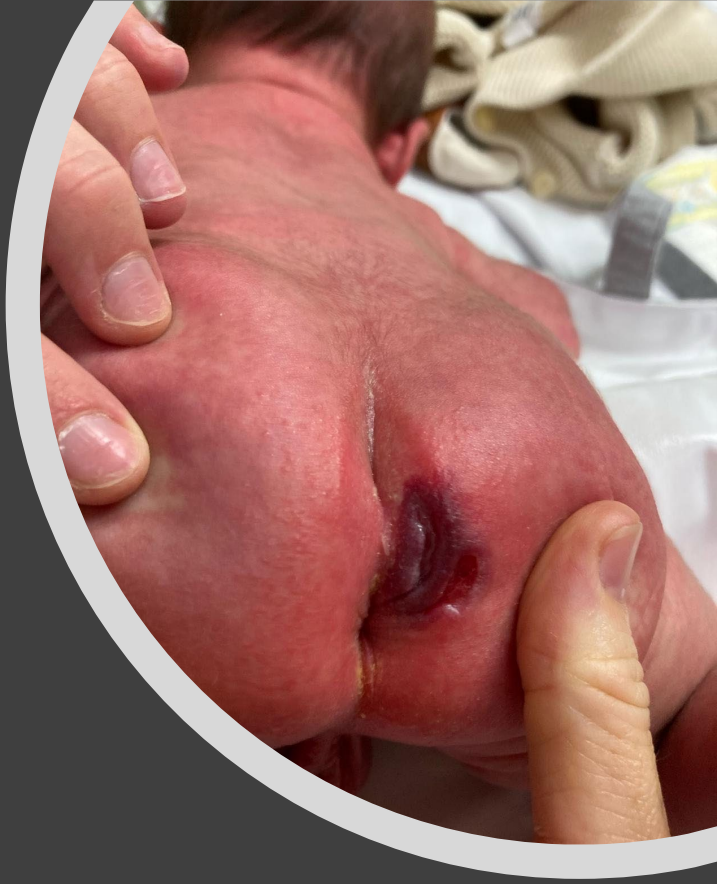
Infantile Hemangioma



- Most common vascular tumor in infants and children
- Rapid onset (0-9months) -> slow involution (years)
- More common in: females, premature
- Clinical presentation: superficial, deep, mixed
- Characterized as:
  - Localized
  - Segmental
  - Multiple (>=5 small localized lesions)



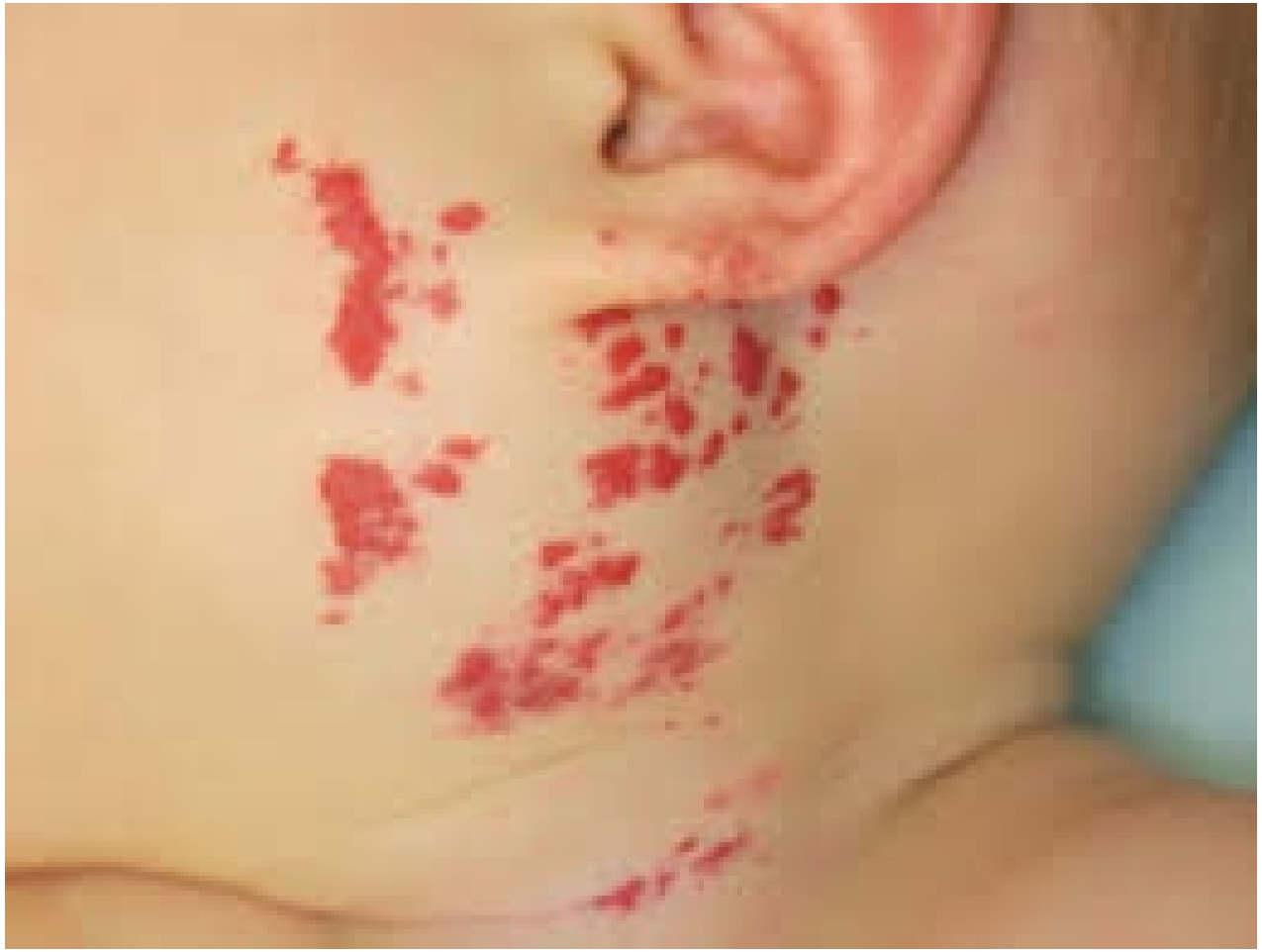




Infantile Hemangiomas – Localized When we do we need to see earlier?

Infantile Hemangioma Segmental

- What is important about this case?



PHACE Syndrome

Posterior fossa malformations

Most commonly the Dandy-Walker variants

Hemangiomas

Particularly large, segmental facial lesions

Arterial abnormalities

Mainly cerebrovascular and in the carotid system

Cardiac abnormalities

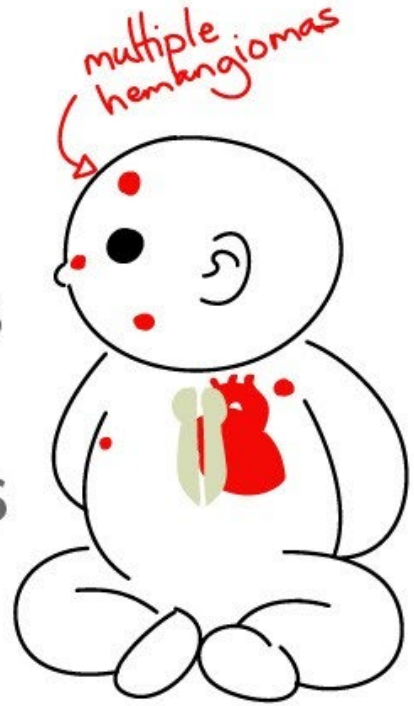
Coarctation, aortic arch anomalies, VSDs

Eye abnormalities

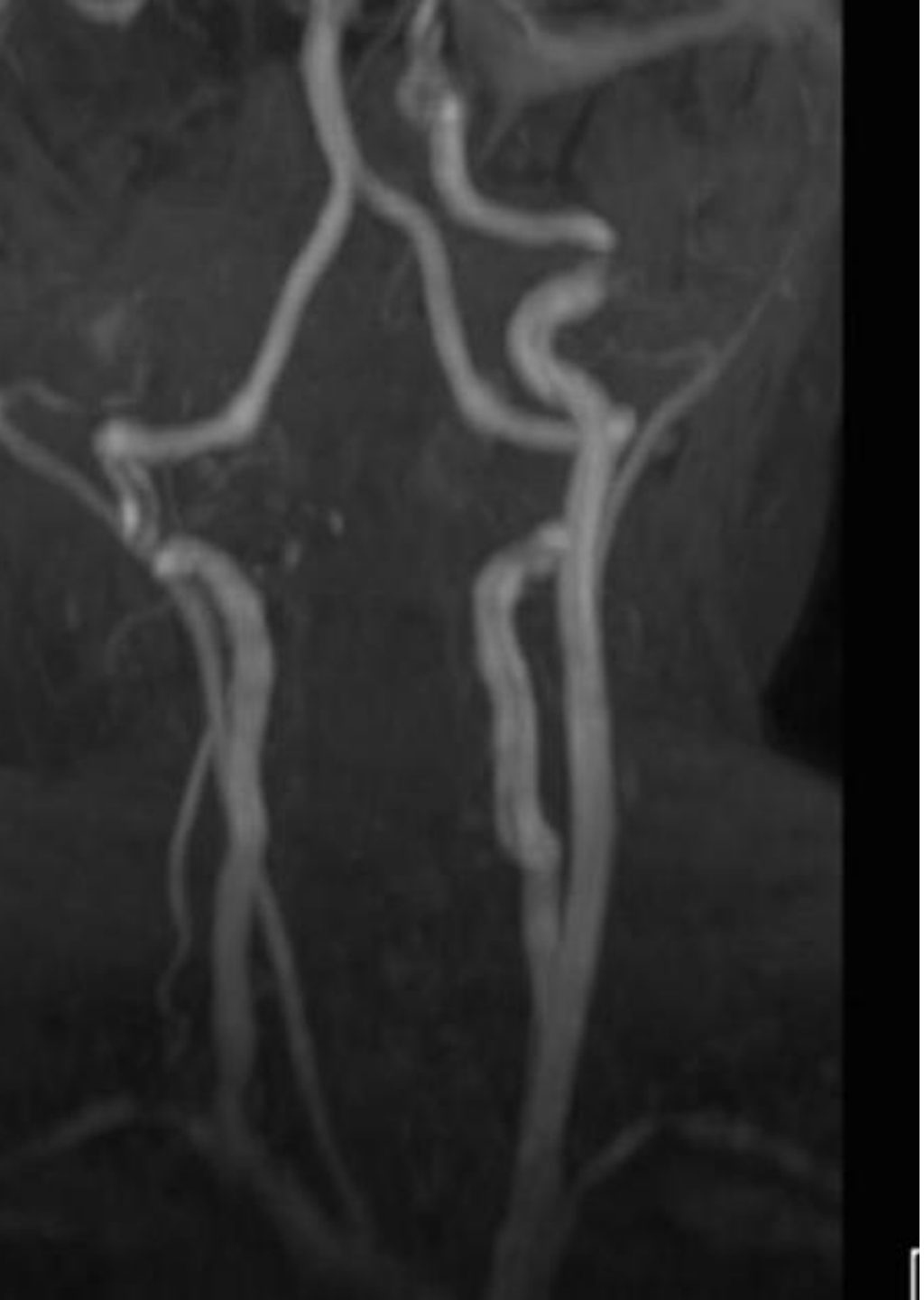
Microphthalmos, retinal vascular abnormalities, persistent fetal retinal vessels, optic nerve atrophy, iris hypertrophy, colobomas, excavated optic disc

Sternal cleft

Sternal cleft, supraumbilical raphe, or both

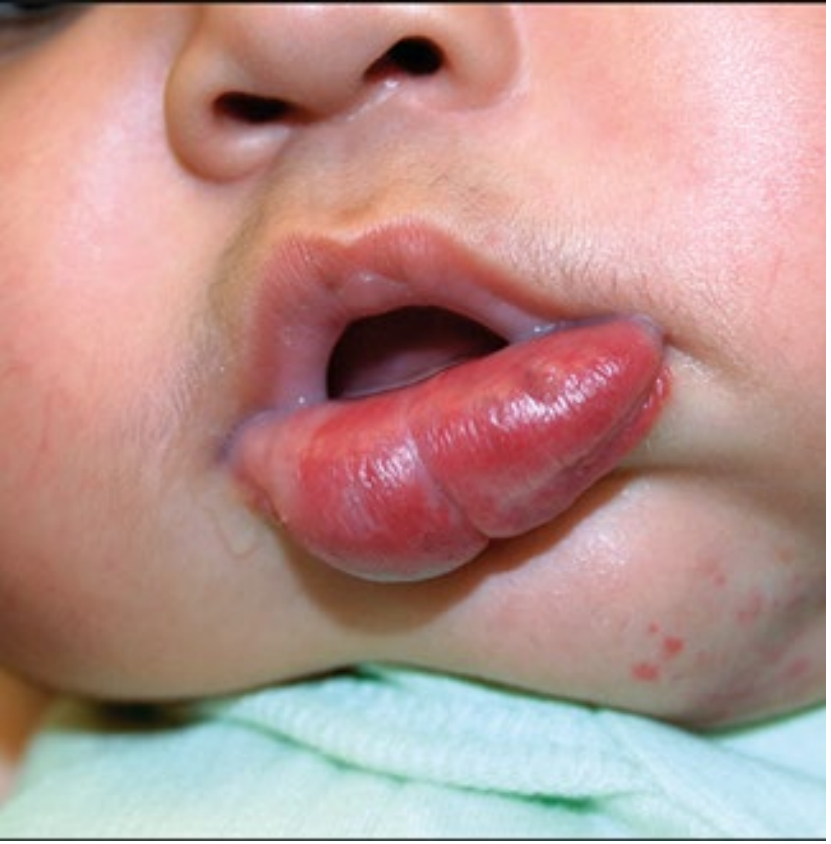


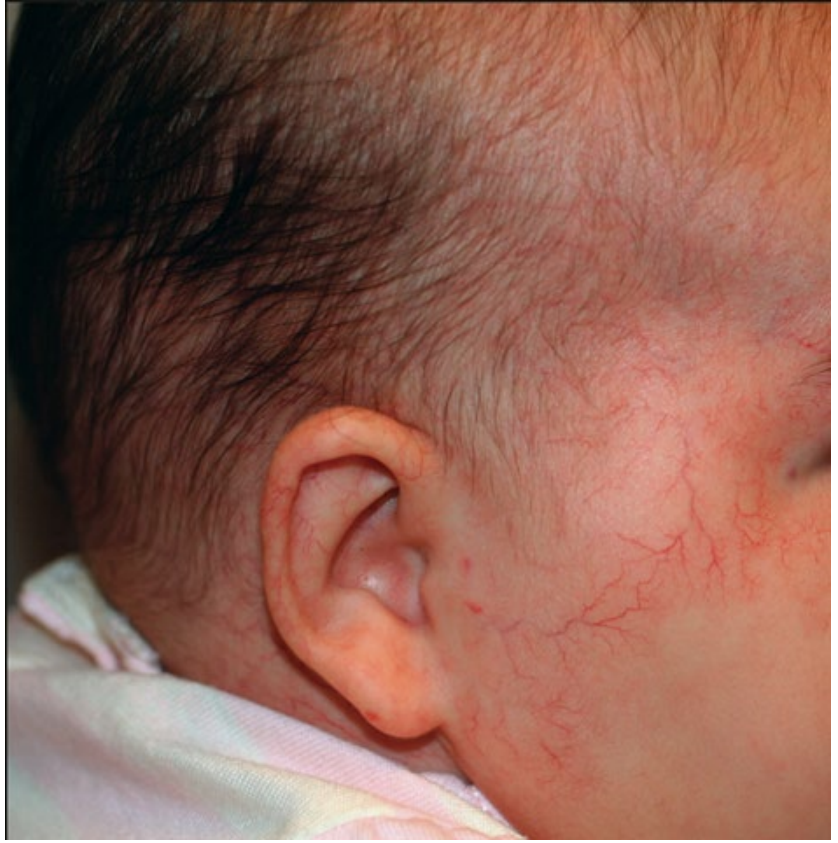
https://sketchymedicine.com/2014/02/phace-syndrome-hemangiomas/

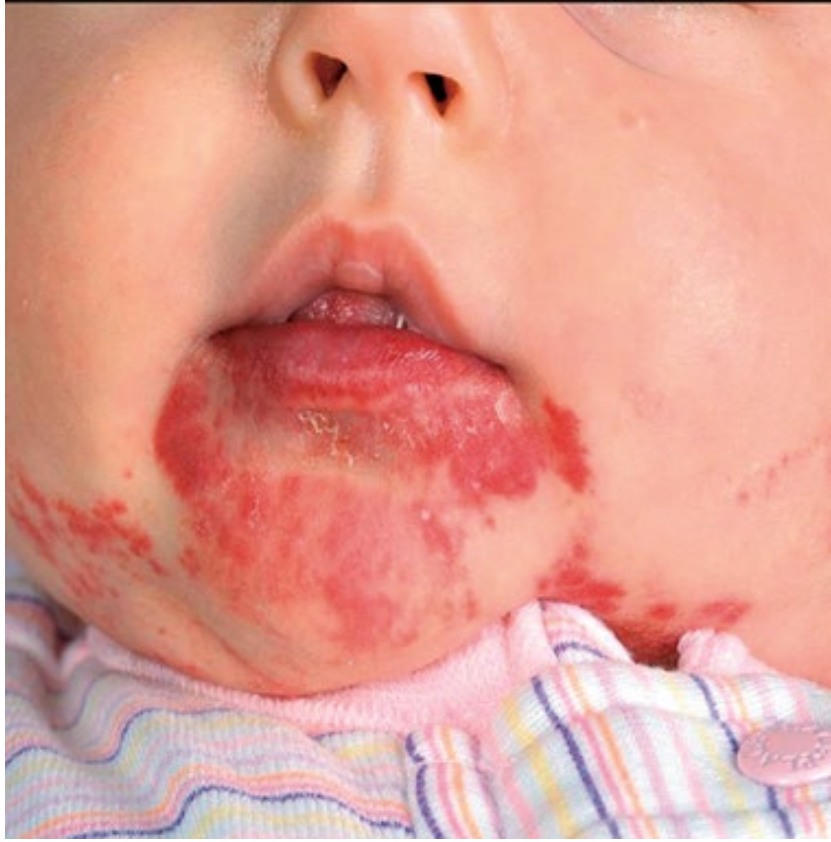


PHACES Syndrome

- Investigations
  - MRA of the brain – looking for tortuous vessels, absent vessels, posterior fossa abnormalities
    - Worried about theoretical risk of stroke with starting propranolol if significant vessel abnormalities
  - Echo cardiogram
  - Ophthalmology referral
- Management
  - Oral propranolol







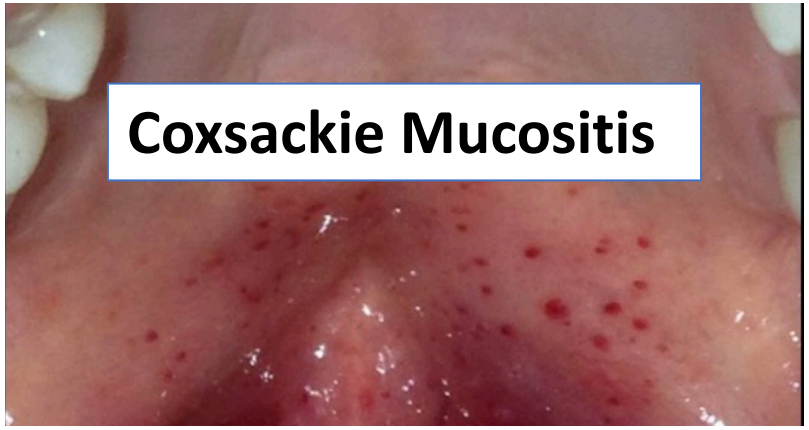
Cutaneous hemangiomas as a clinic clue to airway involvement

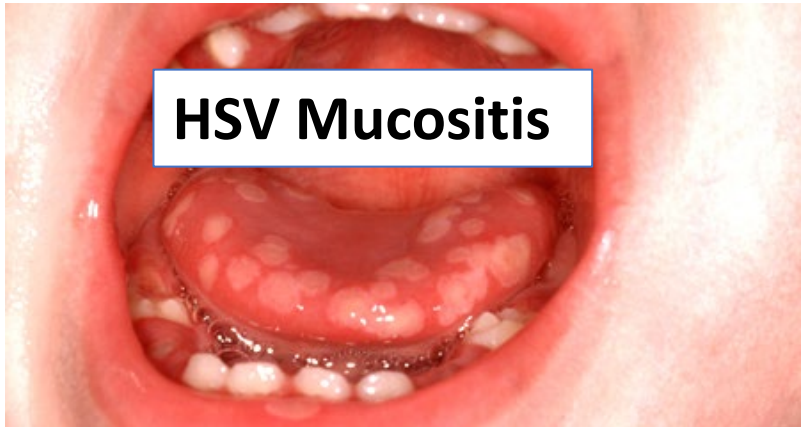
- >50% of individuals with airway involvement have skin involvement
- Symptoms: noisy breathing, difficulty breathing, stridor
- High risk location: mandibular/"beard" distribution

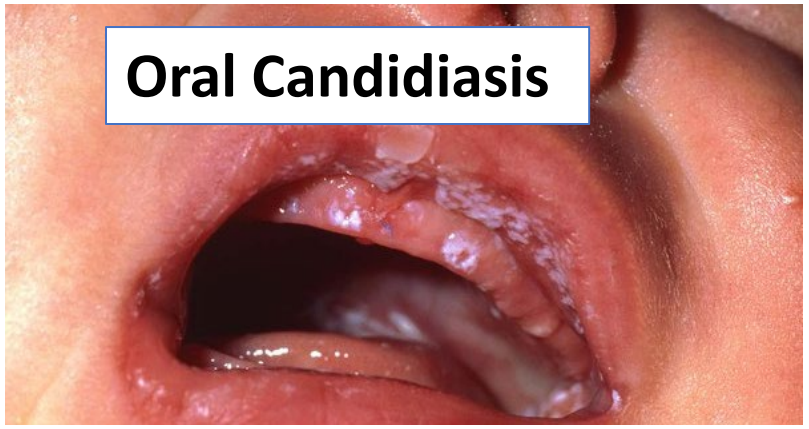
Haggstrom AN, Skillman S, Garzon MC, et al. Clinical Spectrum and Risk of PHACE Syndrome in Cutaneous and Airway Hemangiomas. *Arch Otolaryngol Head Neck Surg.* 2011;137(7):680–687.

Types of Infectious Oral Mucositis

- HSV mucositis
- Coxsackie mucositis
- Oral candidiasis
- Steven Johnson Syndrome/ Toxic Epidermal Necrolysis
- Erythema Multiforme Major
- Mycoplasma-induced Rash and Mucositis



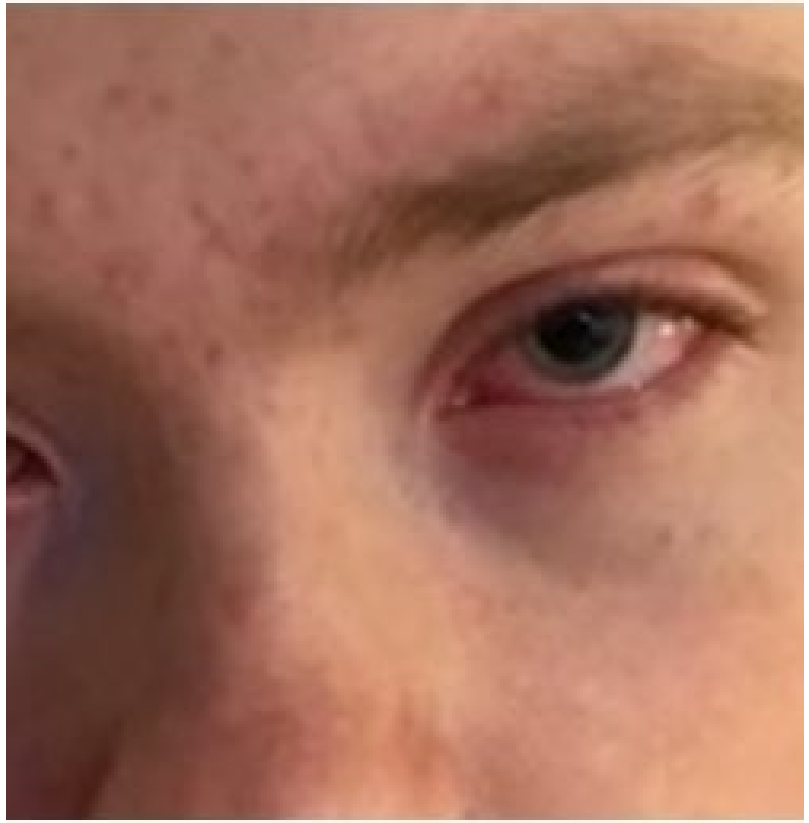
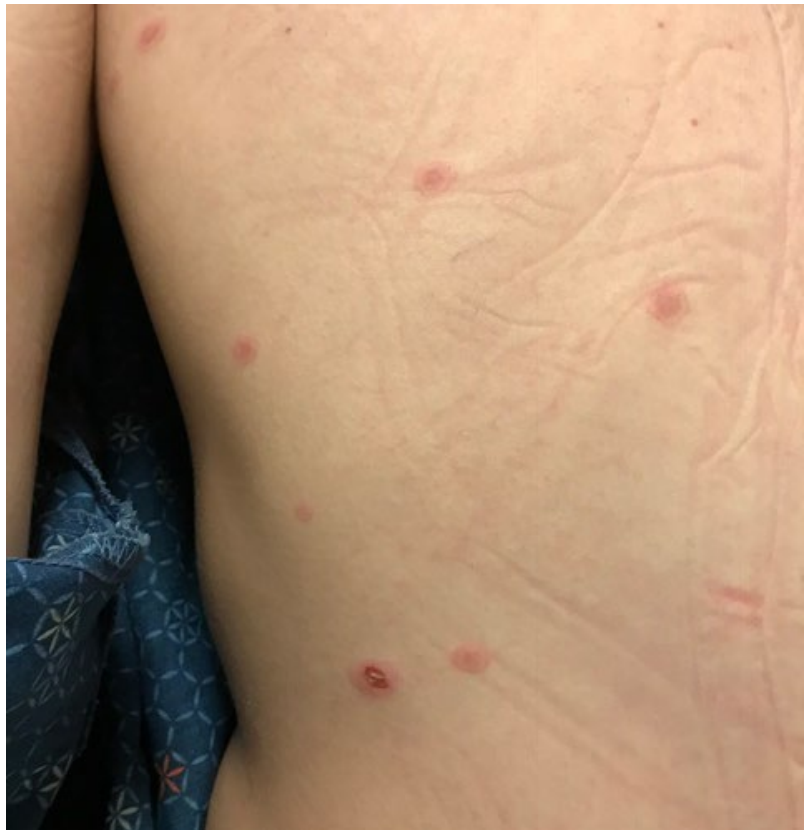
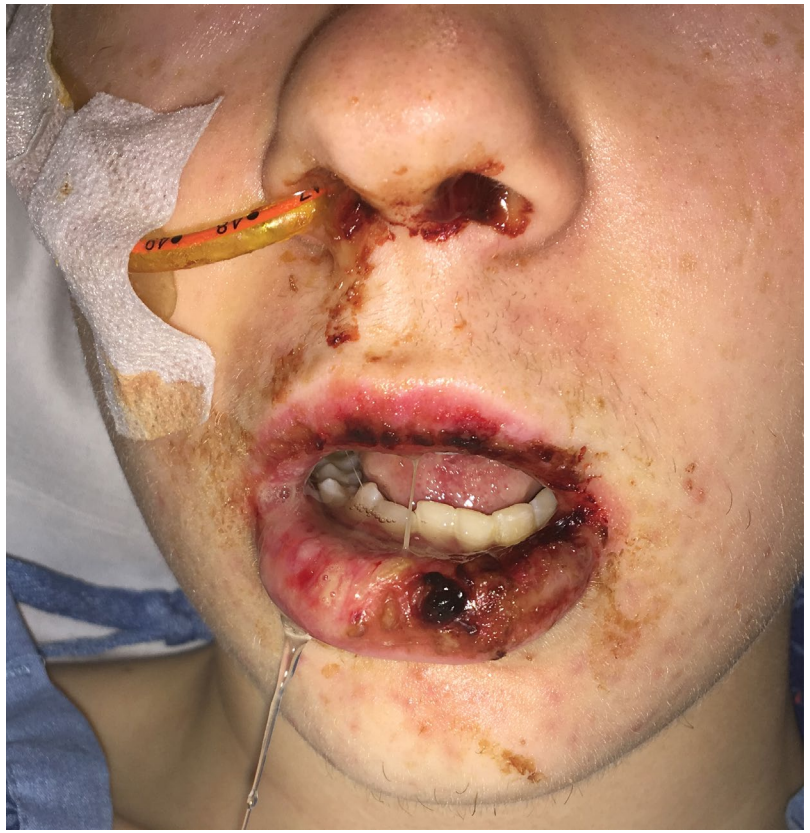




Types of Oral Infectious Mucositis

Mycoplasma-induced Rash and Mucositis (MIRM)

- Most commonly affects young males (avg 12yo), usually in the winter
- MIRM presents with:
  - Limited to no skin involvement
    - Often on the extremities, may be vesiculobullous, can be atypical targetoid
  - Prominent mucositis
    - Usually 2 or more sites affected : oral, ocular, genital, nares, anal
  - Evidence of infection
    - Usually proceeded by 1-week of prodrome (cough, malaise, fever)
    - CXR may show findings consistent with atypical pneumonia
    - Testing positive: Nasal PCR, serology

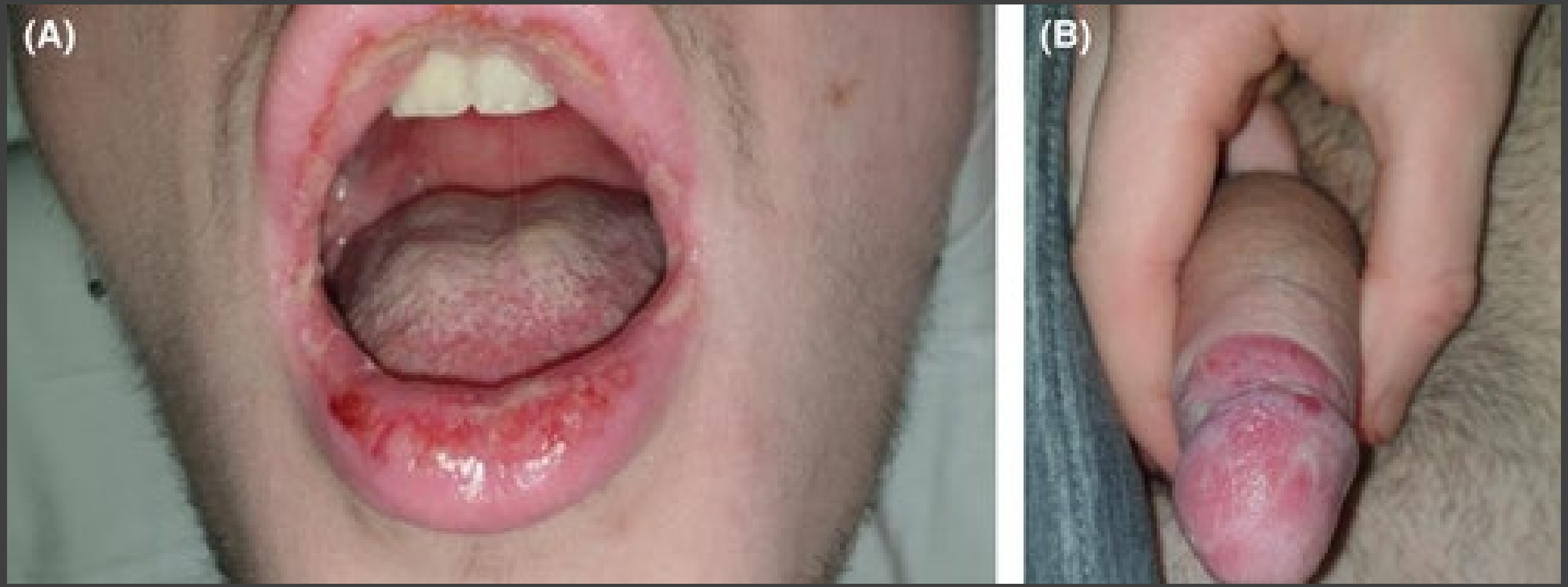




Mycoplasma-induced Rash and Mucositis (MIRM)

https://www.consultant360.com/article/infectious-diseases/bacterial-infections/mycoplasma-pneumoniae-induced-rash-and-mucositis-2

MIRM Management

- Has an excellent prognosis
  - 81% of cases have a full recovery
  - 3% mortality
- Antibiotic therapy targeted to M. pneumonia
  - Macrolide, tetracycline, fluoroquinolone
- Supportive management
  - IV hydration, pain management, mouth care
- Referral to ophtho
- Case reports of IVIG, steroids and cyclosporine



When there is no M in MIRM?

- Have you ever encountered a patient with an acute onset mucositis, with or without skin rash, no recent drug exposure, had MIRM high on your differential but the mycoplasma testing was negative?

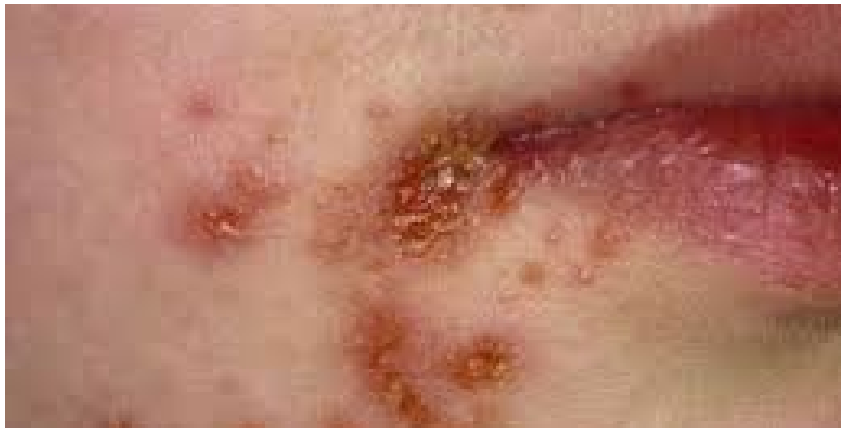
Bowe, S., O'Connor, C., Gleeson, C. and Murphy, M. (2021), Reactive infectious mucocutaneous eruption in children diagnosed with COVID-19. Pediatr Dermatol, 38: 1385-1386.

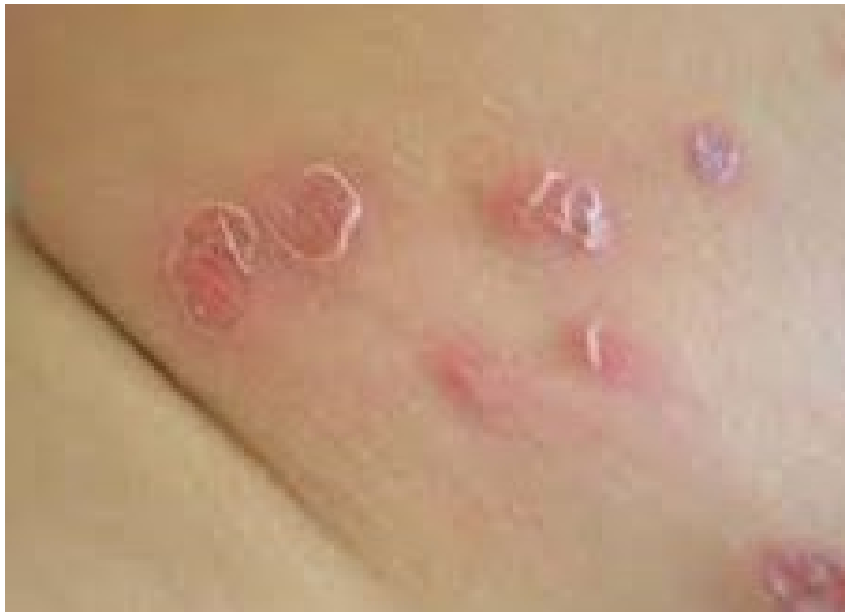
Reactive Infectious Mucocutaneous Eruption (RIME)

- Chlamydia pneumonia
- Parainfluenza type 2
- Influenza B
- Rhinovirus
- Enterovirus (including coxsackie)
- Adenovirus
- COVID-19

Comparison of Reactive Mucositis

Comparison of SJS/TEN, EM Major, RIME/MIRM			
	SJS/TEN	EM Major	RIME/MIRM
Mucositis	Yes	Yes	Yes
Skin lesions	Dusky red macules ++ erosion, bullae	Targetoid, atypical targets (palpable), few bullae	Minimal, atypical targets, few vesicles
Distribution	Face, trunk > extremities	Extremities, face	Extremities
Systemic symptoms	Fever, hepatitis, cytopenia lymphadenopathy	Fever, arthralgias	Cough, fever, malaise
Precipitating factors	Drugs >>> infection	HSV, mycoplasma	Mycoplasma, chlamydia, viruses





Impetigo

- Most common bacterial infection in children
- Two clinical presentations:
  - Non-bullous (70%) – S. aureus > Strep pyogenes
    - Erosions with honey coloured crust
    - Face is the most common area
    - Risks: traumatized, abraded or eczematous skin
  - Bullous (30%) – phage group II staph aureus
    - Flaccid bullae and erosions with collarette of scale
    - Affects intact skin

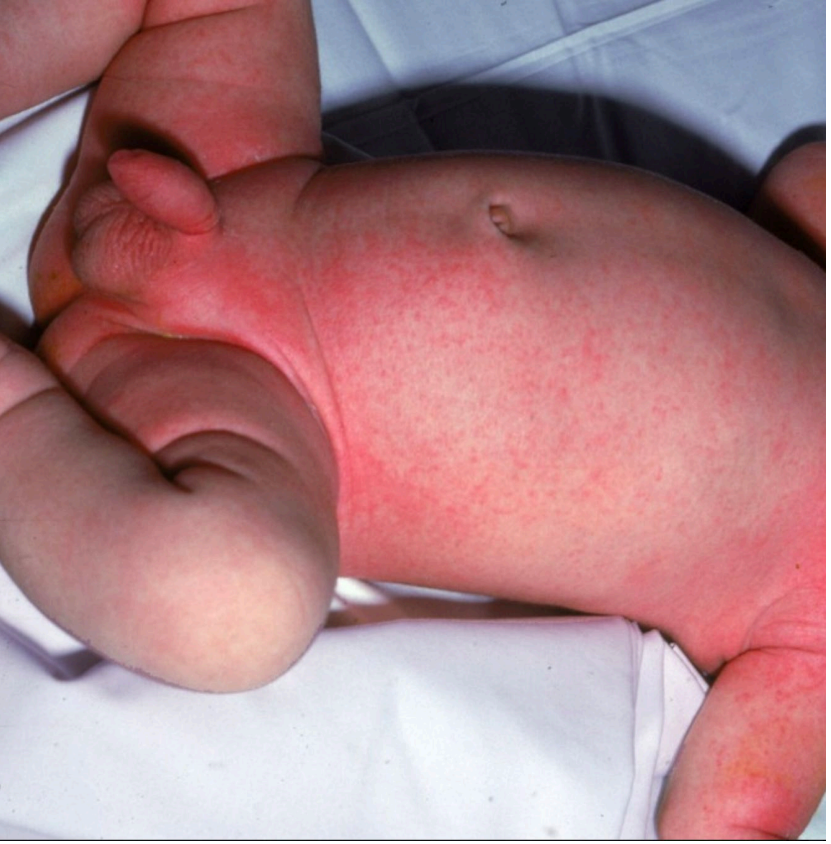
Bolognia J, Schaffer J, Cerroni L, eds. Dermatology. 4th ed. Philadelphia: Elsevier.

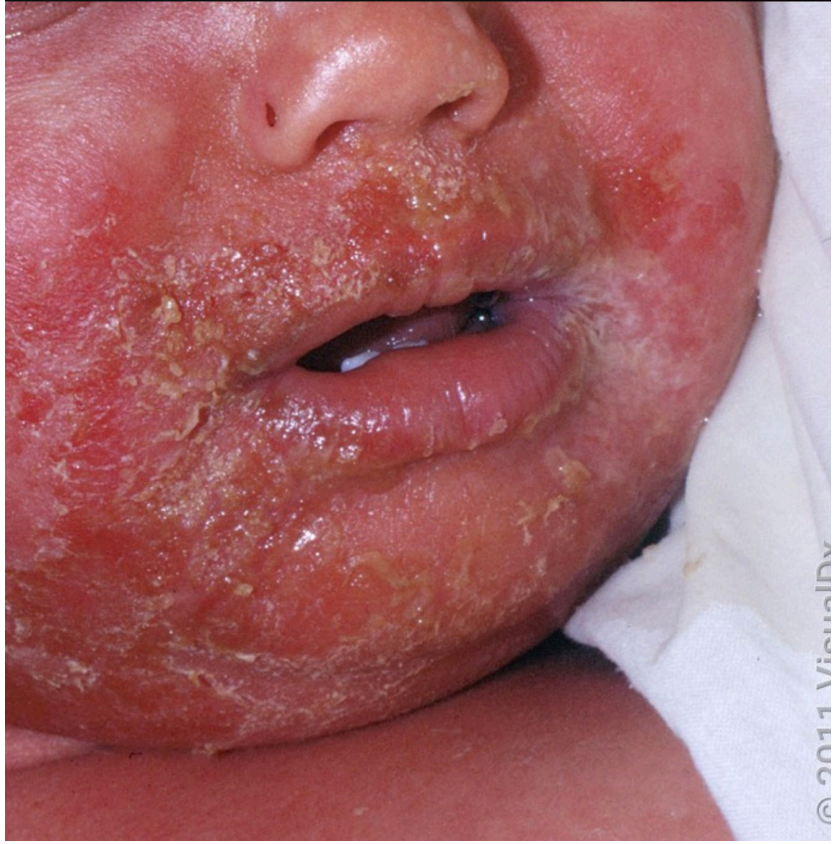
Impetigo

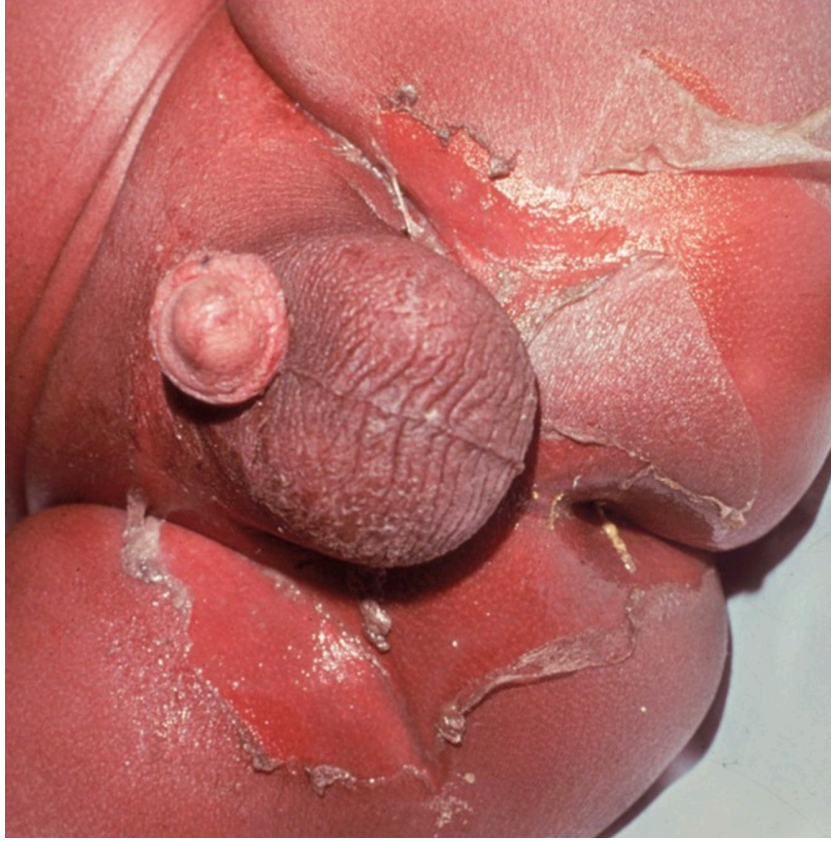
- Treatments
  - Non-bullous impetigo
    - Localized : usually treat topically with mupirocin ointment BID-TID for 5-7 days
    - Diffuse : systemic abx (cephalexin, clindamycin, doxycycline, septra)
    - Treat the eczema!!!
  - Bullous impetigo
    - This is very contagious, should have linens separate from others in the house
    - Localized : usually treat topically with mupirocin ointment BID-TID for 5-7 days
    - Diffuse : systemic abx (cephalexin, clindamycin, doxycycline, septra)

Staph Scalded Skin Syndrome

- Pathogenesis: phage group II S aureus infection -> toxin production -> toxin distributed through the bloodstream -> widespread cleavage of important structural component in skin
- Most commonly seen in infants and young children due to lack of neutralizing antibodies and lower renal clearance
- Source usually nasopharynx or conjunctiva







Staph Scalded Skin Syndrome

- Clinical presentation:
  - Prodrome: fever, irritability, skin tenderness
  - Erythema presenting 1st on head and flexural areas -> generalized within 48h
  - Exfoliation starts around mouth and flexural areas -> generlized

https://www.visualdx.com/visualdx/diagnosis/staphylococcal+scalded+skin+syndrome?moduleId=103&diagnosisId=52340

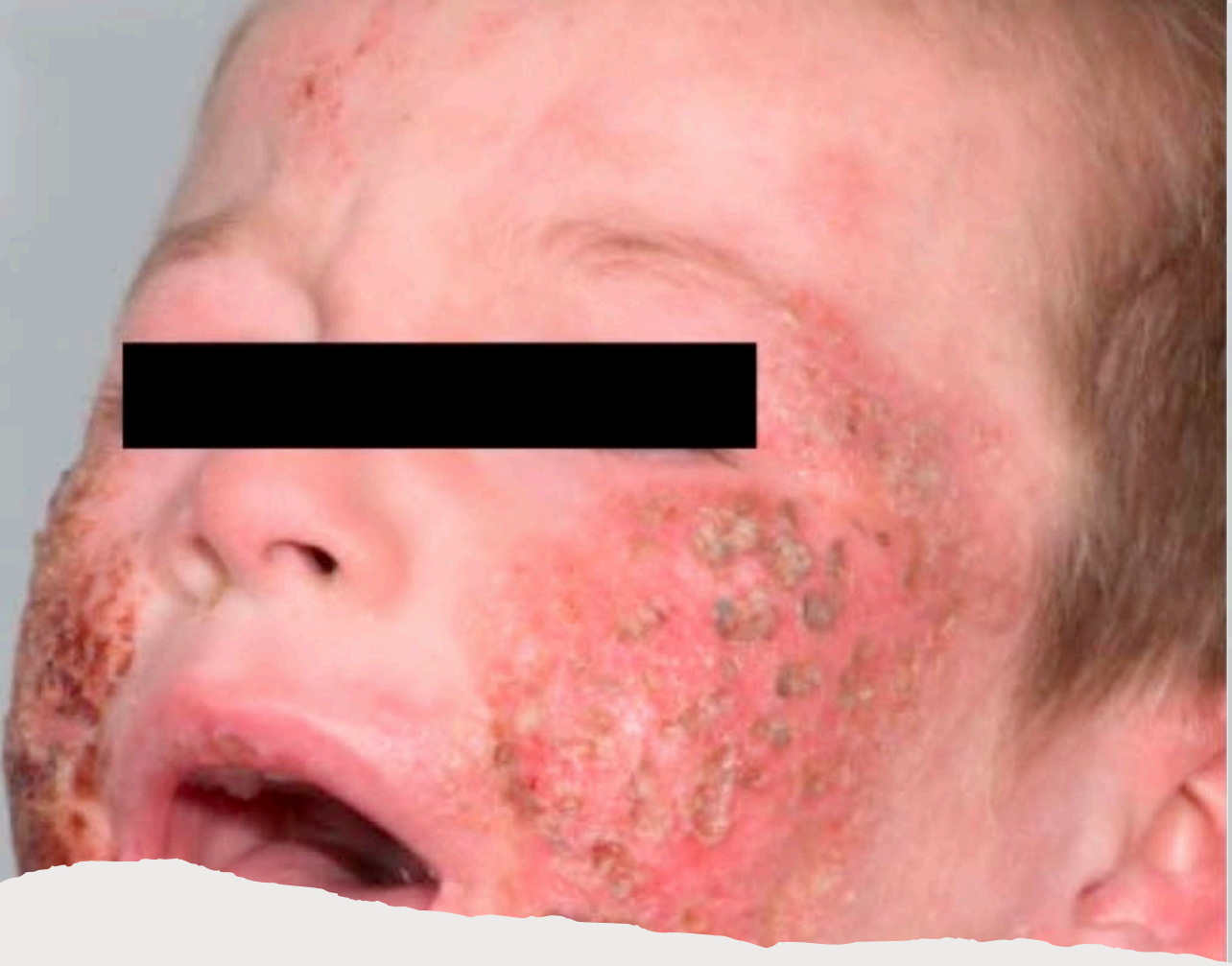
Staph Scalded Skin Syndrome

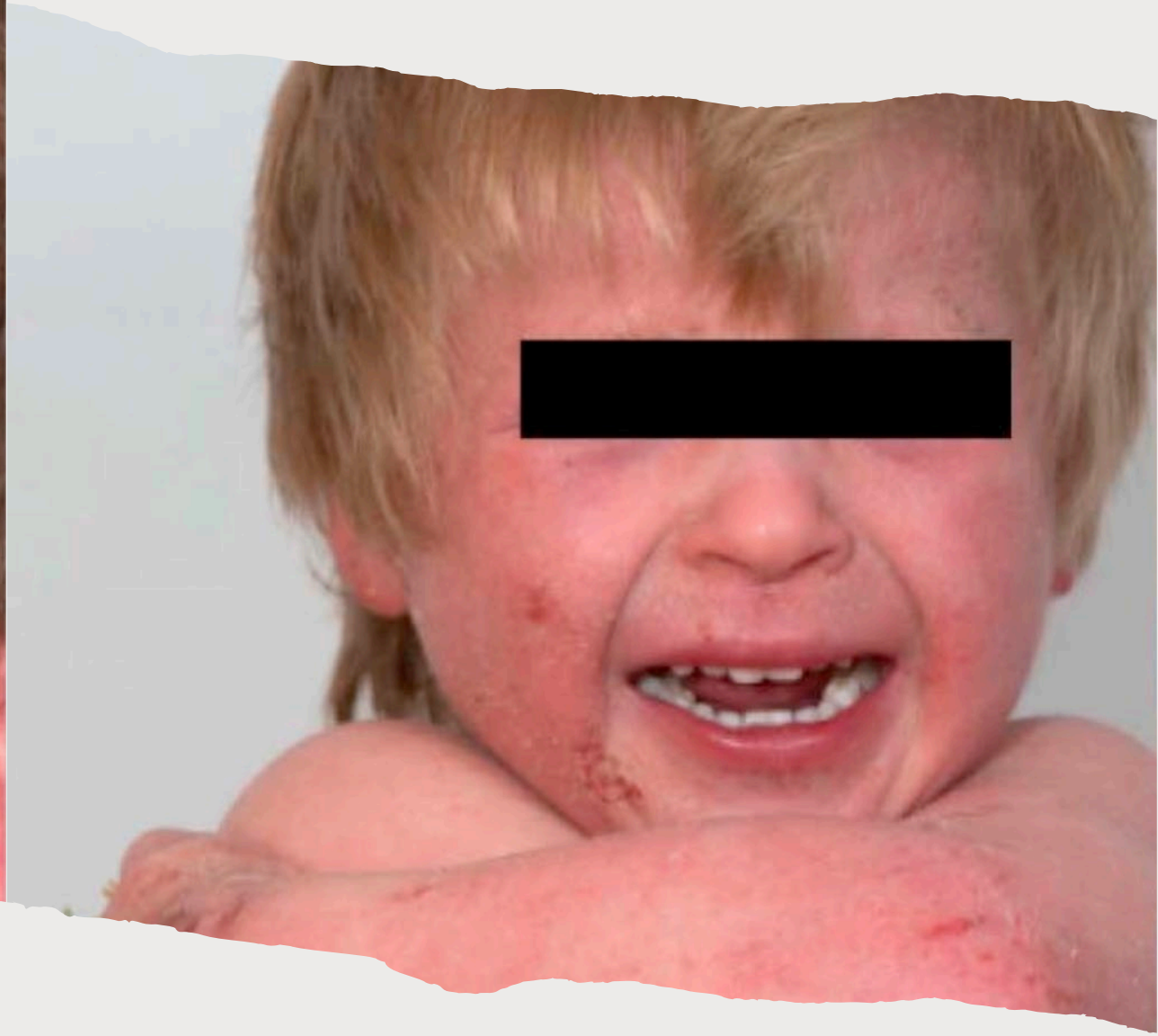
- Diagnosis:
  - Clinical diagnosis
  - Culture of bullae and blood usually negative, culture from conjunctiva, nasopharynx or perianal area could be positive

Comparison of SJS/TEN and SSSS		
	SJS/TEN	SSSS
Distribution of rash	Areas of sparing often present	Generalized with flexural accentuation
Mucous membranes	Involved, erosions	Uninvolved
Nikolsky sign	In some area, difficult to elicit	Present in seemingly uninvolved skin
Face	Vermillion lip erosions, crusting	Perioral and periocular radial fissuring

Staph Scalded Skin Syndrome

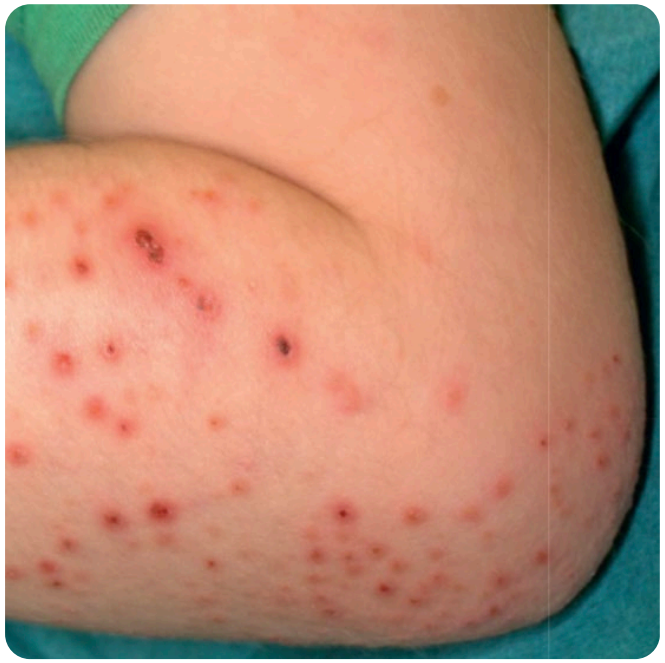
- Management
  - Supportive
    - IV hydration since significant fluid loss through skin
    - Warming
    - Pain management
    - Wound care – petroleum jelly, nonadherent dressings
  - Anti-infective
    - Anti-MRSA treatment (vancomycin, oxacillin) – 10-14 days based on response
    - Clindamycin – may decrease exotoxin production





Horrible Eczema

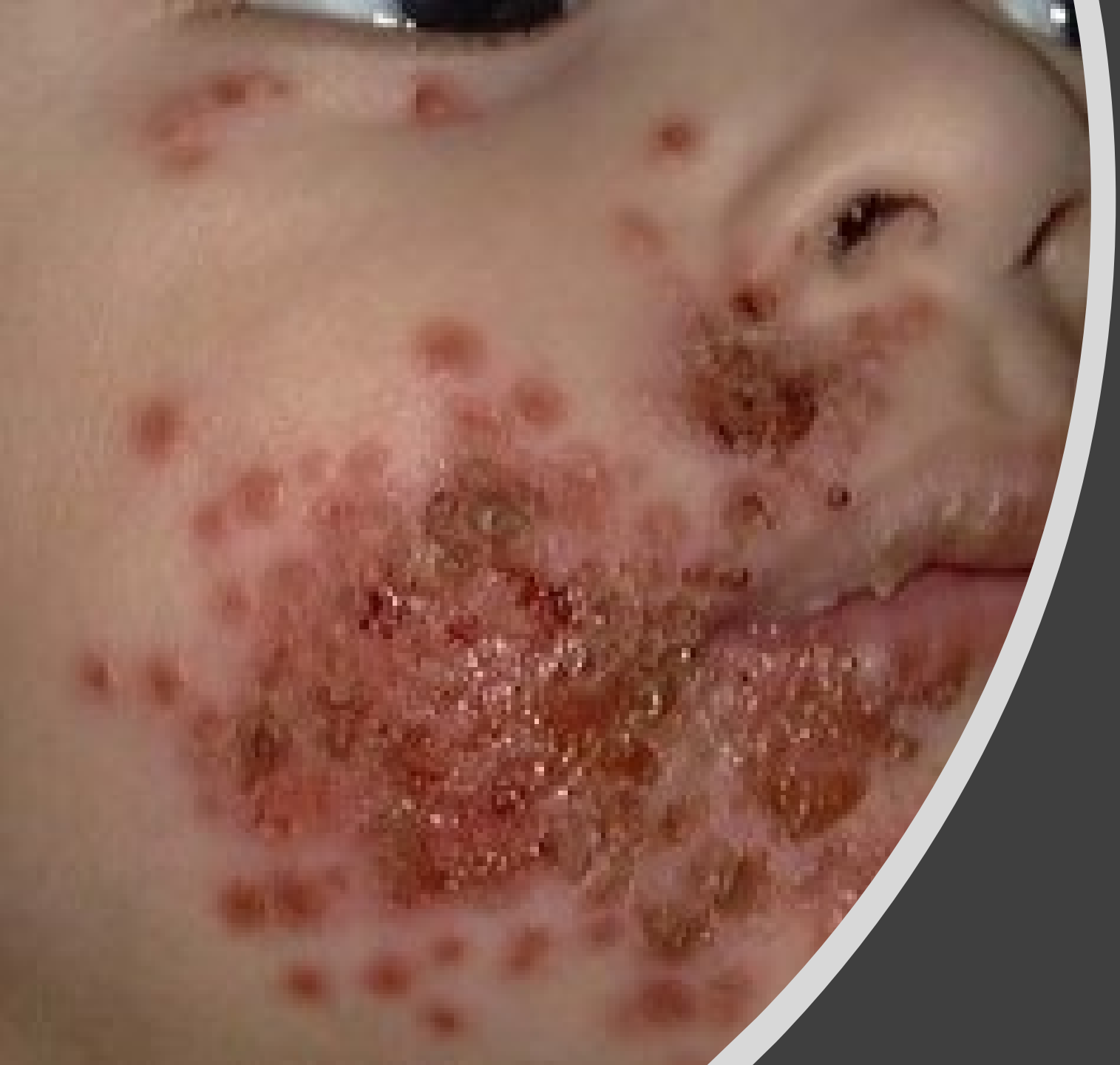
Clinical approach to the patient with refractory atopic dermatitis. Izadi, Neema et al. Annals of Allergy, Asthma & Immunology, Volume 120, Issue 1, 23 - 33.e1



Management of Horrible Eczema

- Topical steroids
  - Betamethasone valerate 0.1% ointment BID liberally for 2 weeks
  - Hydrocortisone 2.5% in Aquaphor for the face and can be used as a moisturizing cream
- Systemic steroids
  - I try to avoid since they end up in the same situation
- Look for secondary infection
  - Yellow crusts : S. aureus
  - Punched-out erosions: HSV
- Antihistamines
  - No real role in dermatitis since not a histamine process

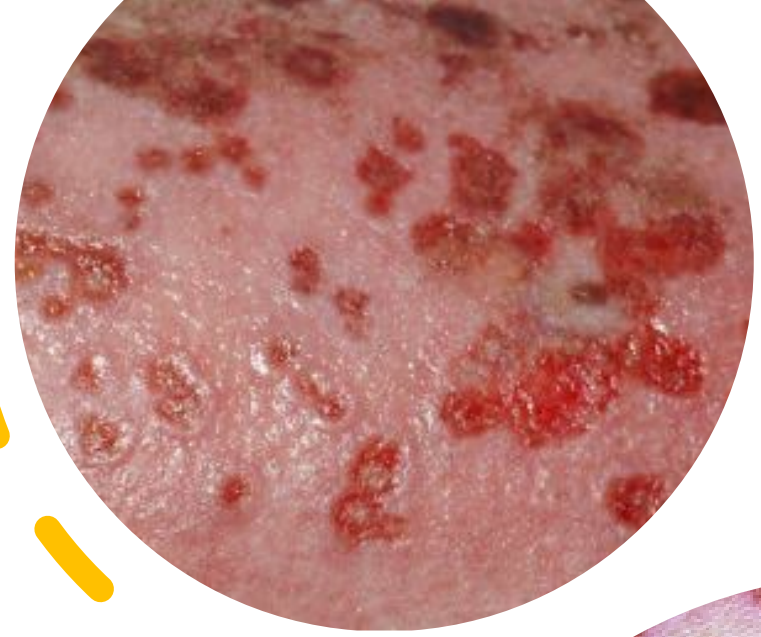
Bolognia J, Schaffer J, Cerroni L, eds. Dermatology. 4th ed. Philadelphia: Elsevier.

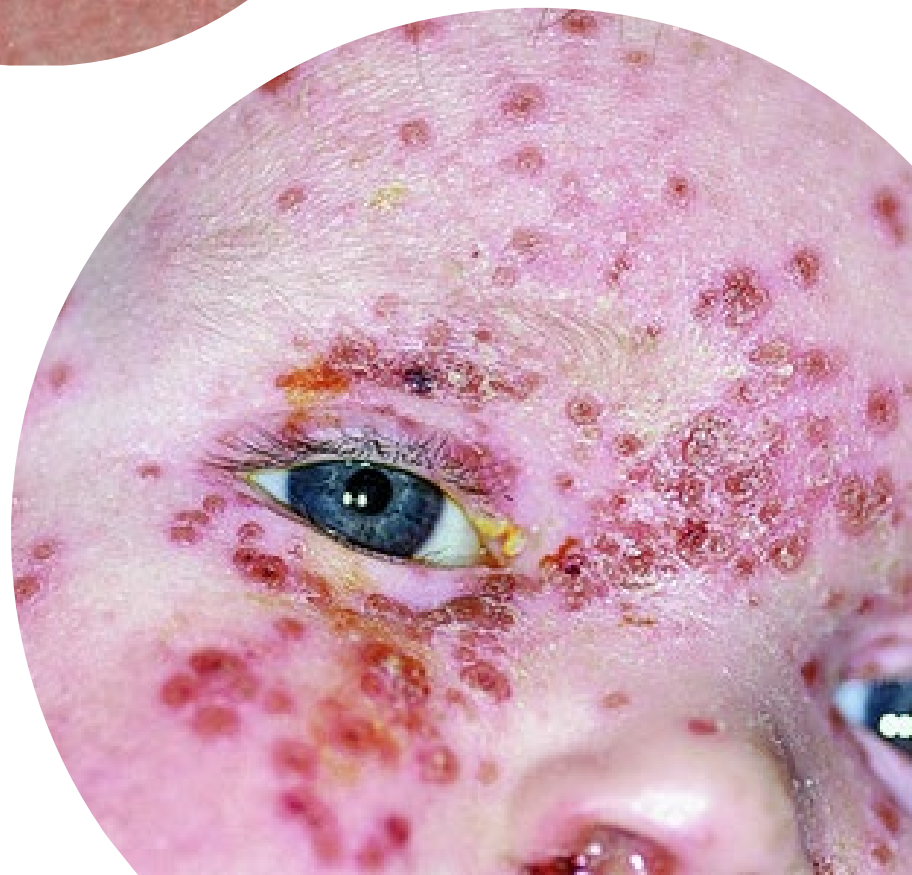


Why are we looking at impetigo again?

Eczema Herpeticum

- Rapid dissemination of herpes simplex viral infection in areas of eczema
- Can present anywhere but most commonly affects head and neck
- Multiple monomorphous punched-out erosions with crusting
- Often associated with fever, malaise, lymphadenopathy





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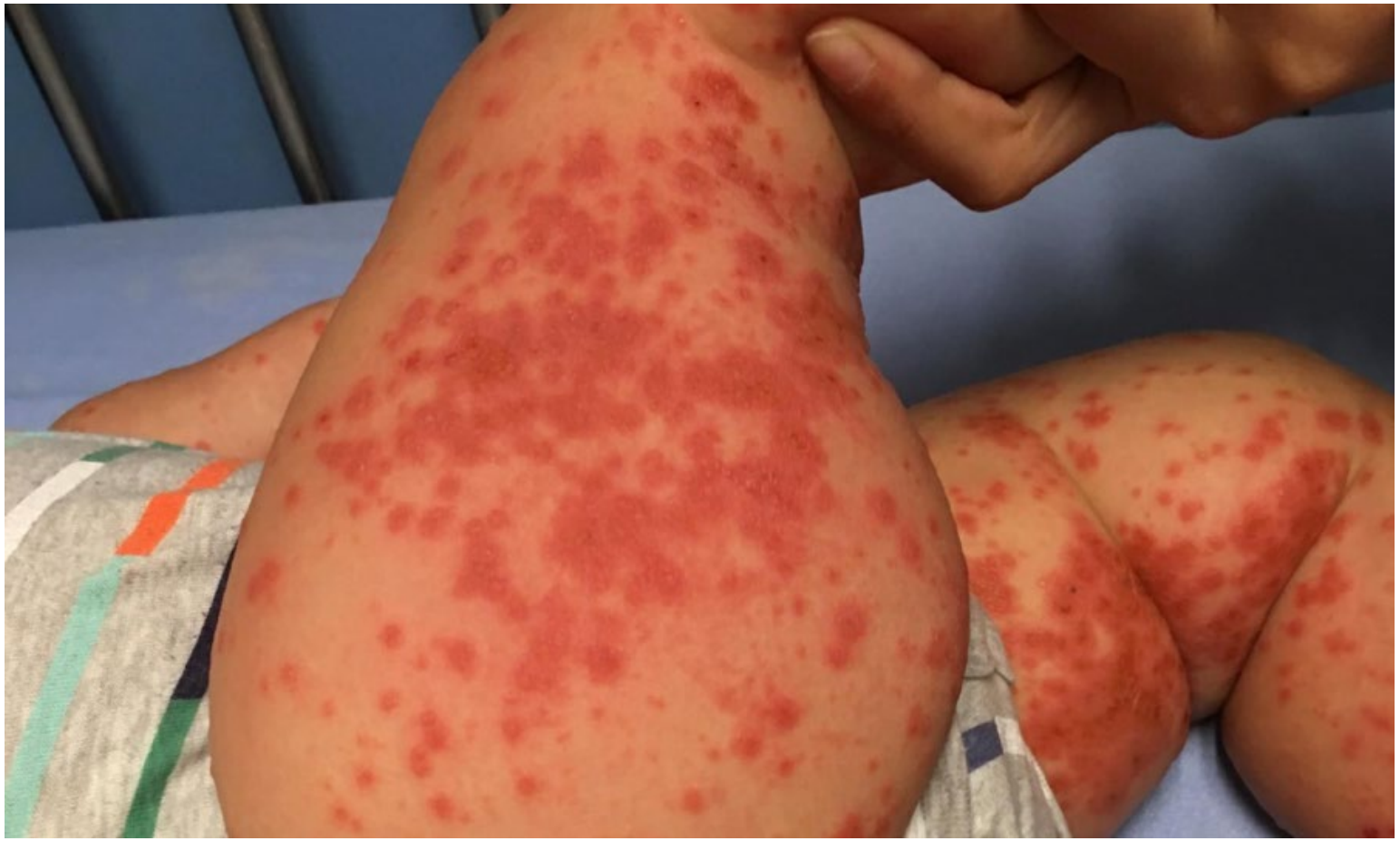
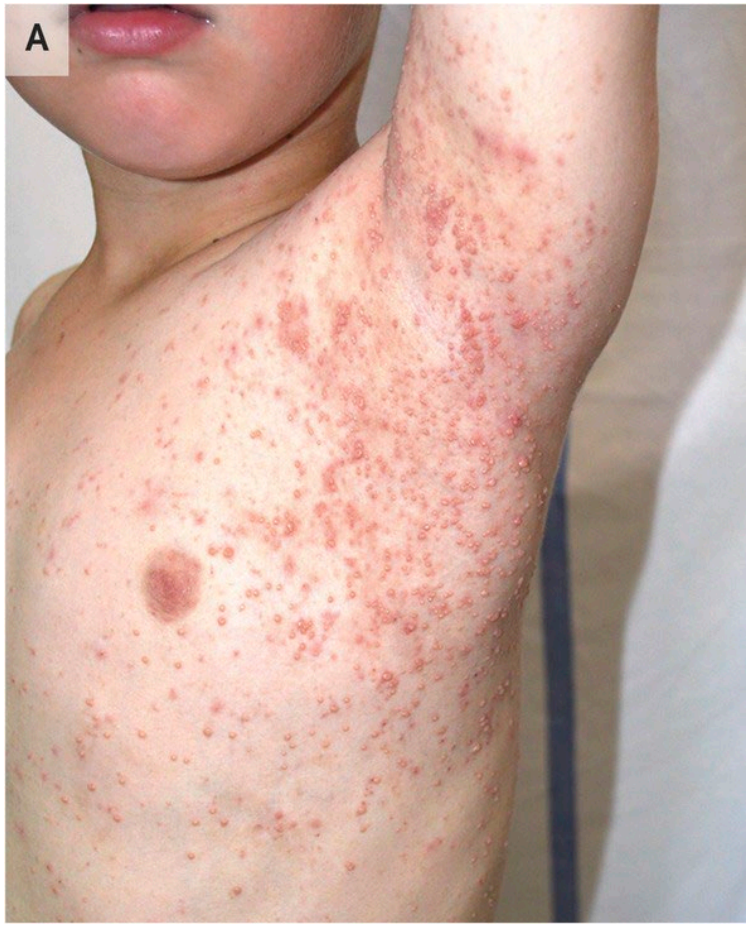
Eczema Herpeticum

- Complications:
  - Superinfection with S. aureus or S. pyogenes
  - Herpetic keratoconjunctivitis
  - Meningoencephalitis
- Diagnosis:
  - Ideally viral swab but can treat on clinical suspicion
- Management:
  - Mild cases
    - Oral acyclovir: 30-60mg/kg/day divided TID
    - Oral valacyclovir: 20mg/kg/day divided TID
  - Severe cases or immunosuppressed
    - Admitted for IV acyclovir 5-10mg/kg every 8 hours

Eczema Herpeticum-like

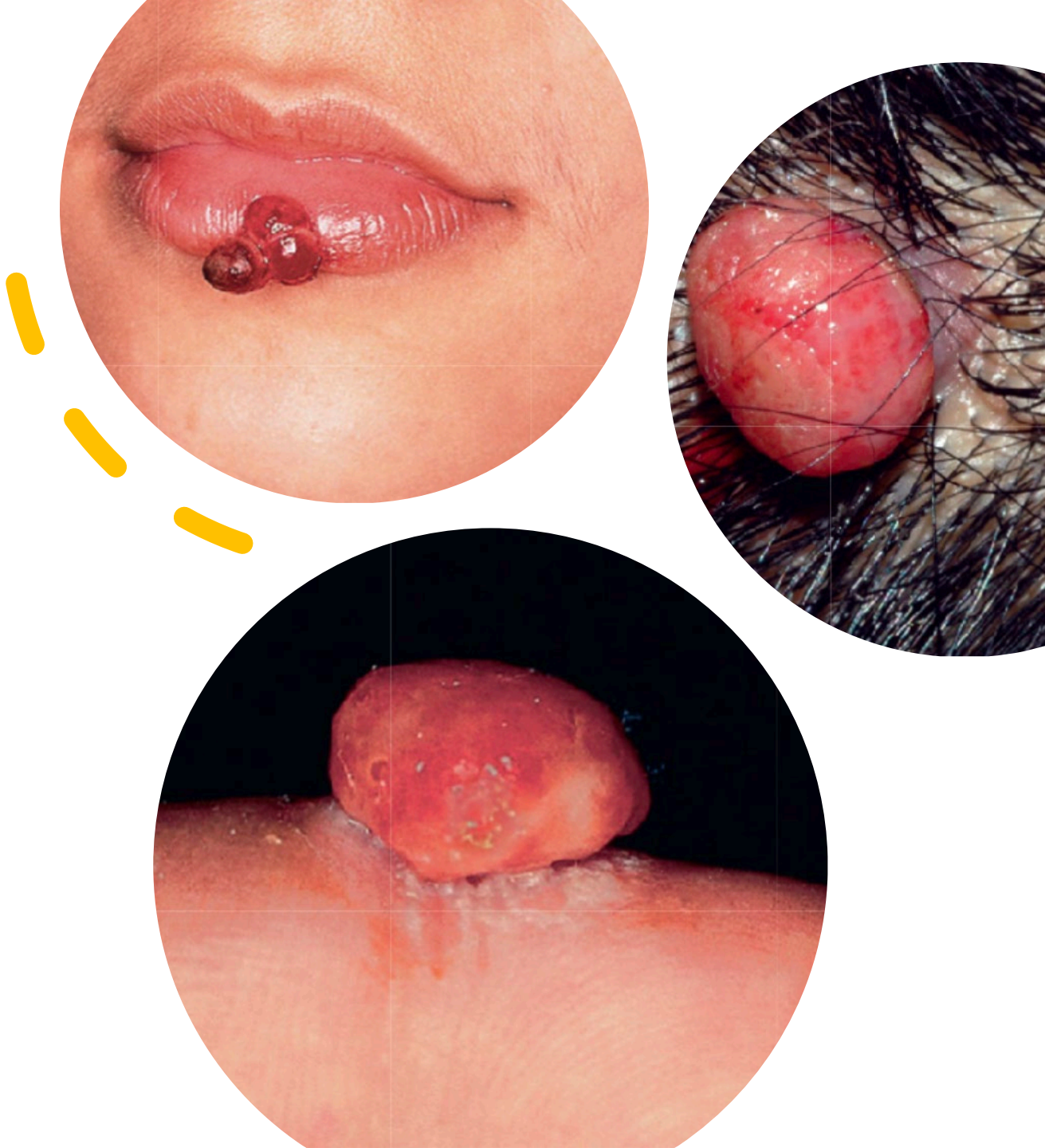




https://www.consultant360.com/article/consultant360/eczema-coxsackium
https://www.nejm.org/doi/full/10.1056/NEJMicm1705273

Pyogenic Granuloma

- Rapidly growing, friable, red papule of the skin the frequently bleeds and ulcerates
- Common sites: oral cavity, face, lips and digits
- 1/3 will develop after trauma



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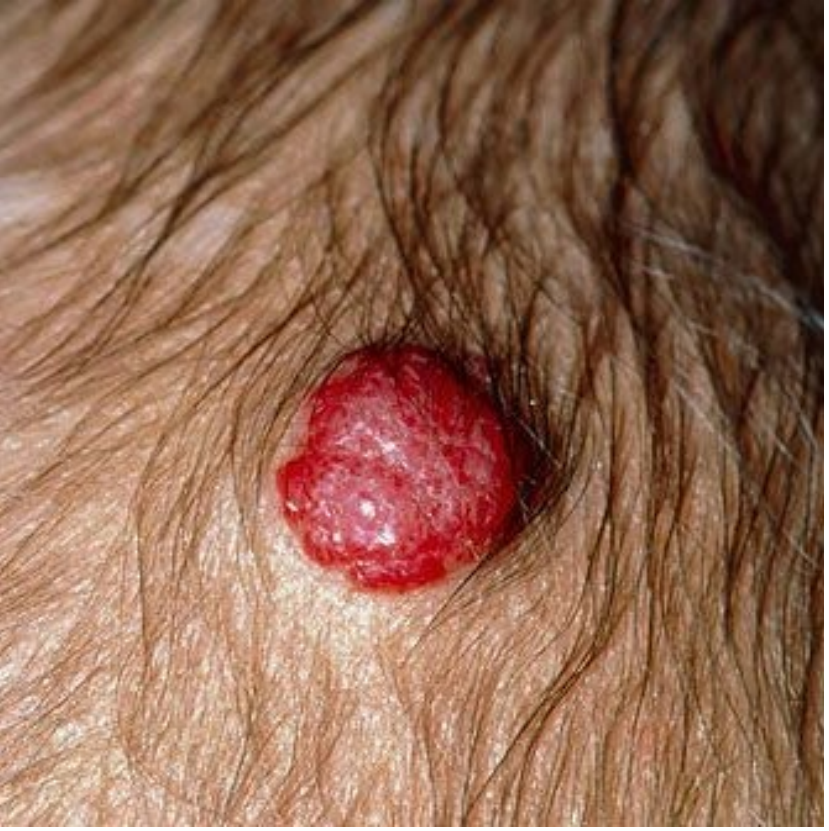
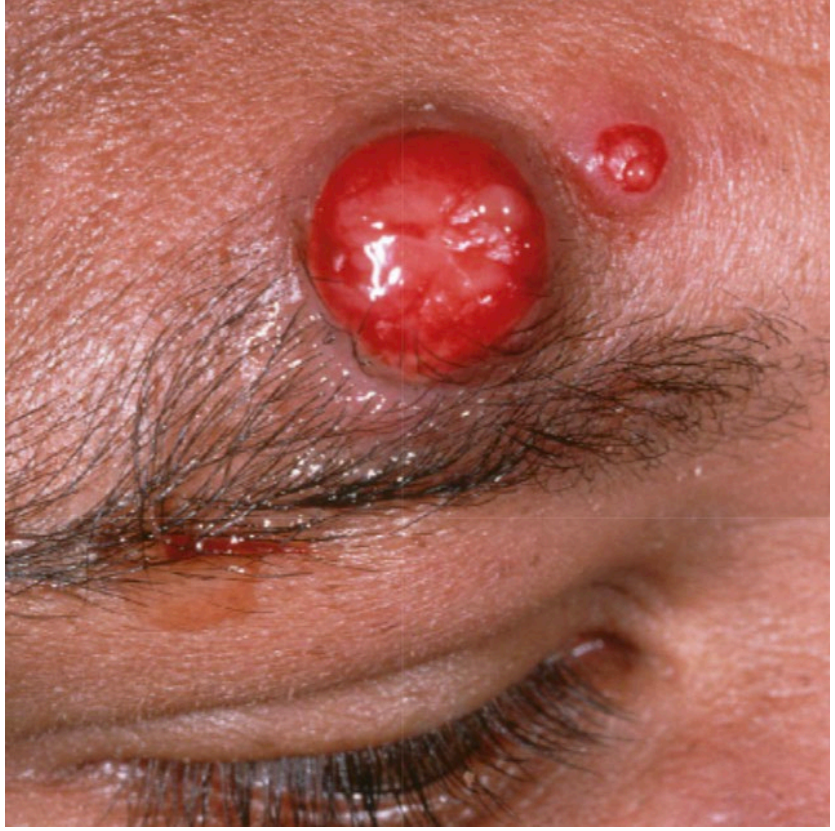
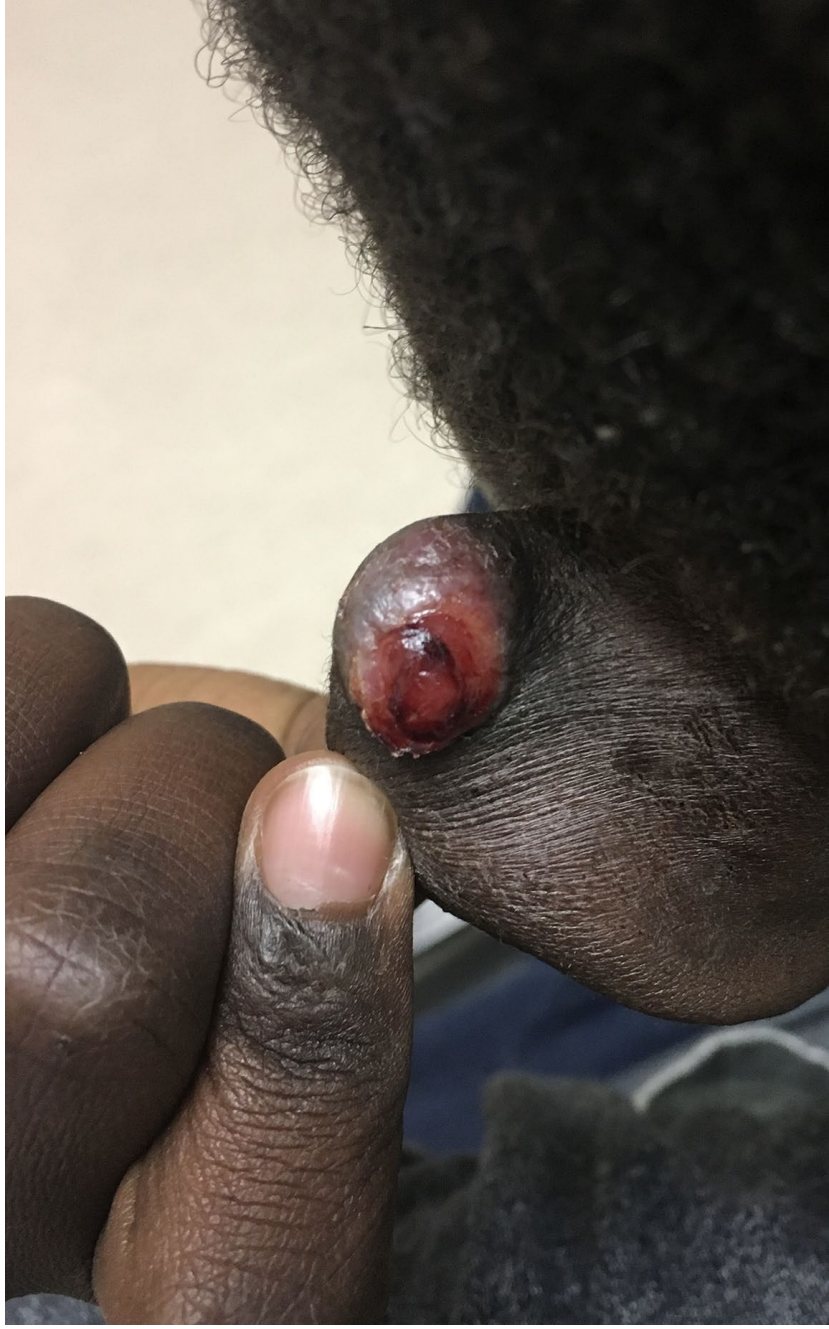






Pyogenic Granuloma

- Differential Diagnosis
  - Amelanotic melanoma – rare and usually darker skinned individual
  - Bacillary angiomatosis, Kaposi sarcoma – immunosuppressed
  - Hemangiomas – not friable

Bolognia J, Schaffer J, Cerroni L, eds. Dermatology. 4th ed. Philadelphia: Elsevier.c

Pyogenic Granuloma

- Management
  - If small – silver nitrate can be helpful
  - If larger – shave excision with electrocautery of the base

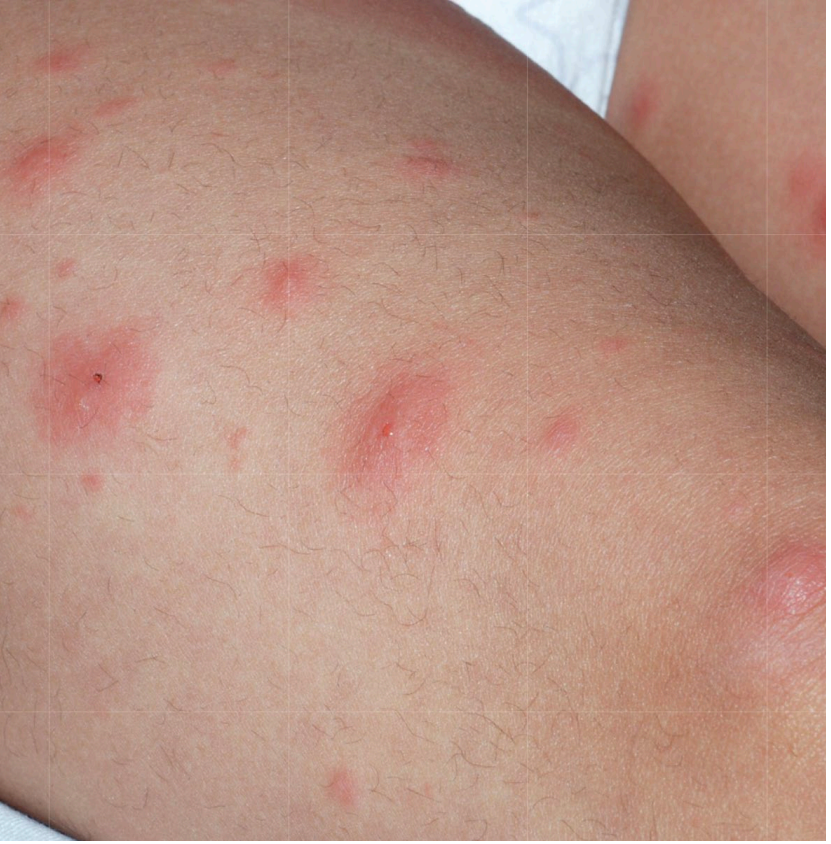


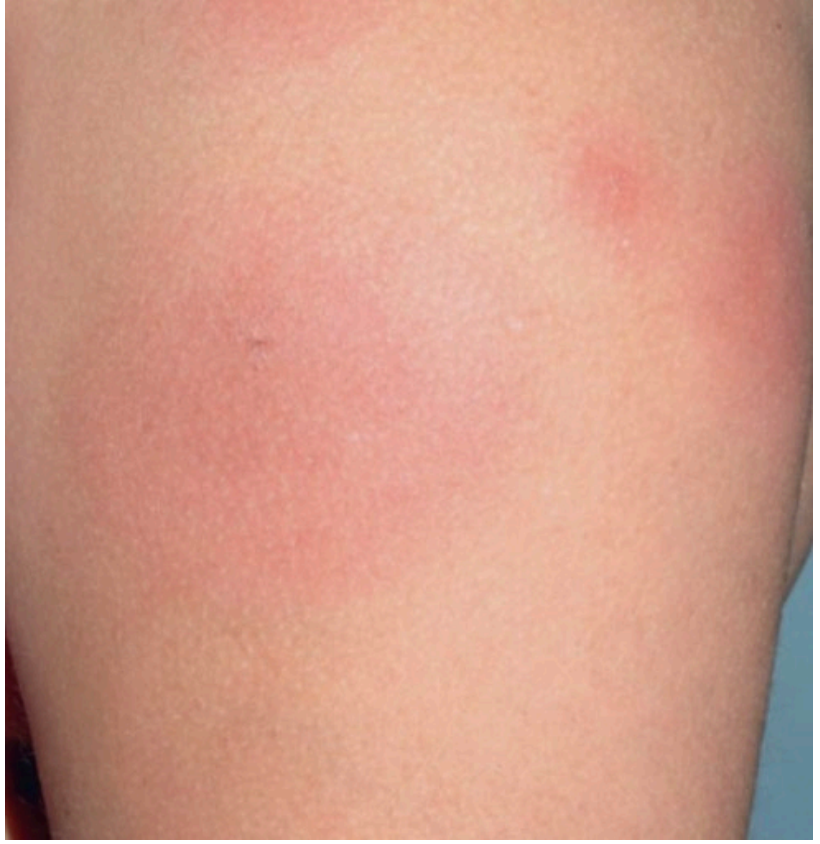

Outside Things

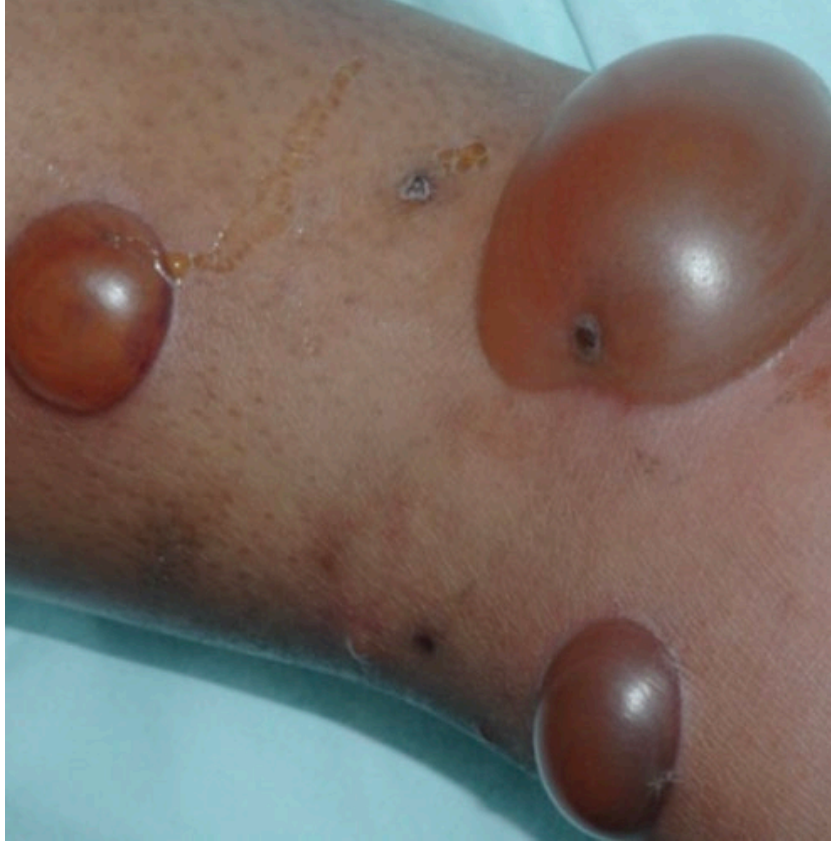
Acute Allergic Contact Dermatitis

- Presentation:
  - Erythema, edema, papules, oozing, vesiculation, bullae
  - Sharp demarcation between normal and involved skin

Bolognia J, Schaffer J, Cerroni L, eds. Dermatology. 4th ed. Philadelphia: Elsevier.







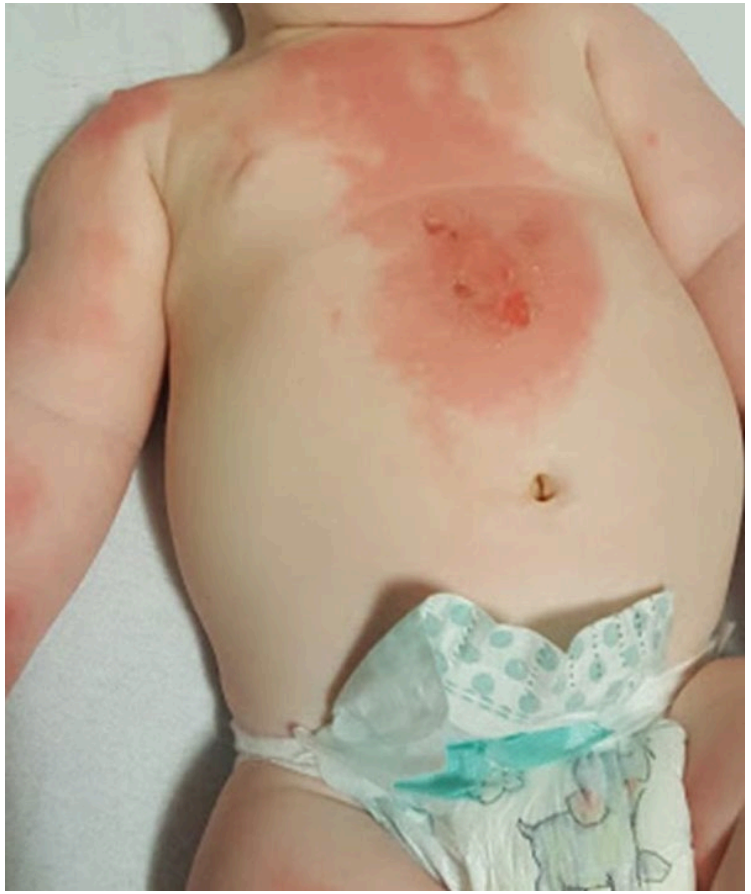
Insect Bite Reactions

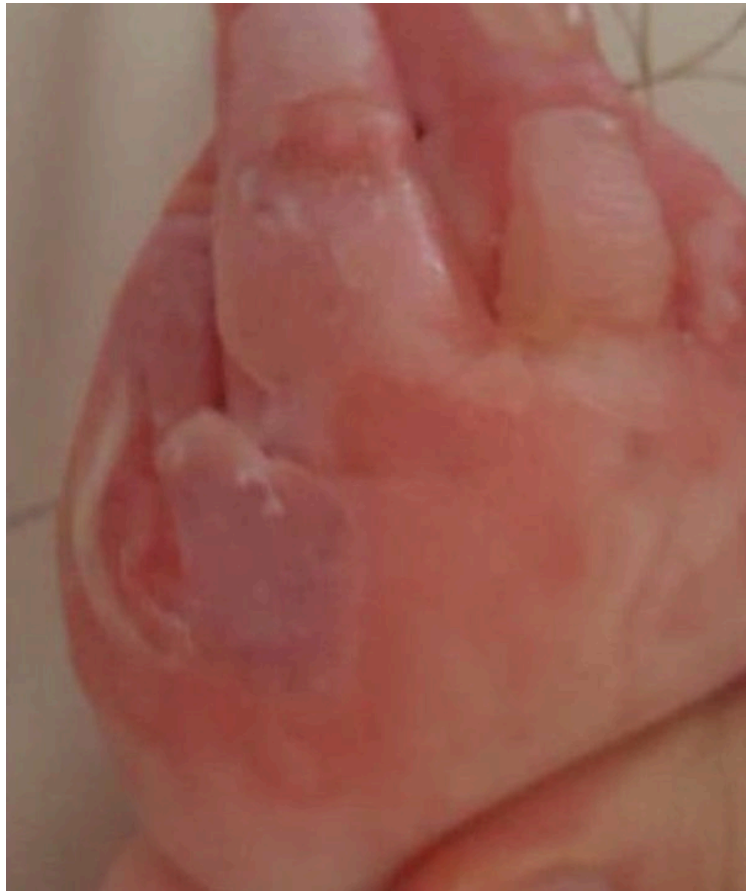
- Multiple red papules usually found on exposed skin (face, neck, extremities)
- Multiple morphologies: papules, papular urticaria, edematous plaques, nodules, vesicles/bullae
- Papular urticaria can become disseminated

Bolognia J, Schaffer J, Cerroni L, eds. Dermatology. 4th ed. Philadelphia: Elsevier.

Phytophotodermatitis

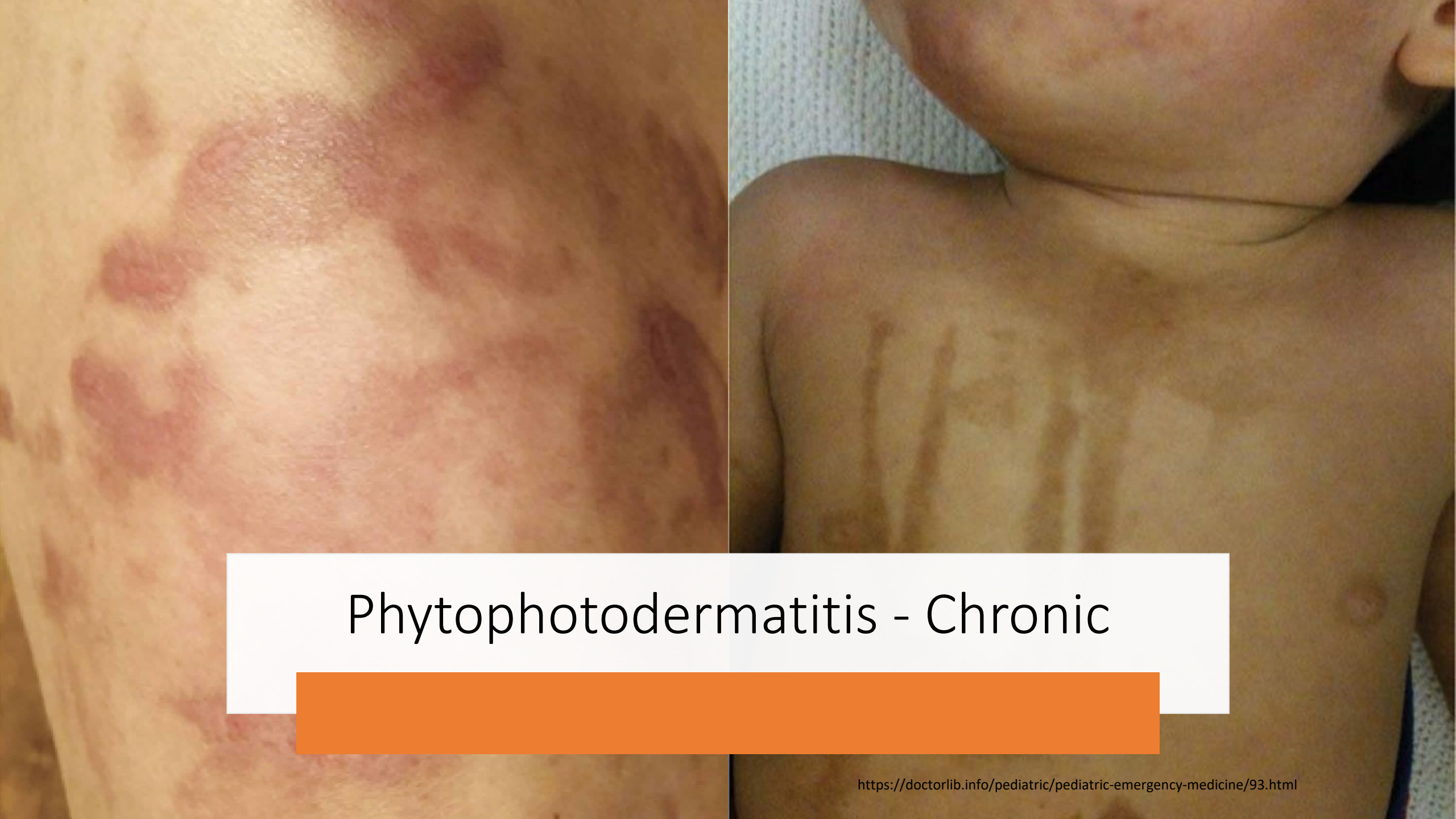
- Phototoxic reaction consisting of erythema (+/- blistering) and delayed hyperpigmentation
- Presentation looks like external cause
- Common culprits:
  - Citrus family: limes, lemon, grapefruit
  - Apiaceae family: celery, fennel, hogweed, parsnip





Phytophotodermatitis - Acute

https://casereports.bmj.com/content/14/5/e241631



Phytophotodermatitis - Chronic

https://doctorlib.info/pediatric/pediatric-emergency-medicine/93.html

- What happened to me?