Childhood Rashes

Common, Uncommon and Masqueraders

K. Jane McClure 8.30.16

Objectives

- Recognize common, not so concerning viral rashes
- Think of and appropriately treat more concerning rashes
- Be able to reassure parents about non concerning rashes and prepare them for the usually long clinical course of these rashes
- Do not diagnose chickenpox without good exposure history, clinical correlation, second opinion and viral testing from lesion
- Do not diagnose Amoxicillin allergy without seeing the rash and consulting a pediatrician
- Consider a trial of Amoxicillin in village clinic, clinic, ER or on inpatient unit
- Use dilute bleach baths/washes for patients, and their contacts, with all bacterial skin infections!

Derm Nomenclature

- Macular
- Papular
- Maculopapular
- Hike Like
- Vesicular
- Vesiculopustular
- Sandpaper
- Morbilliform
- Erythematous
- Serpigenous
- Reticular

Common Viral Rashes

- Roseola (HHV6)-High fever then rash
- Rubella/German Measles (Rubivirus)-Face to body
- Chicken Pox (Varicella Zoster) 5-9 years, new crops daily
- Measles (Paramyxovirus)-face down
- Fifths or Slapped Cheek Disease (Parvovirus) Face to body
- Hand Foot and Mouth Disease (Coxsacckie Virus)
- Herpes

Common Viral Rashes

All childhood viral rashes

- Incubate 1-3 weeks
- Are contagious before the rash shows up
- Spread by contact +/- air
- Occur Spring and Winter/Fall
- Get better on their own in 1-4 weeks
- Are scary looking and require A LOT of parental reassurance

NOTES

To reassure parents-

- Speak authoritatively about a rash being one of many childhood rashes.
- Many look similar, cant always be positive which one, but NOT something bad like RF/Kawasakis/Stevens-Johnson.
- Let them know that based on history and clinical presentation it is not a bad bacterial infection or an amoxicillin rash.
- The child will slowly get better, on their own, with supportive care in 5-7 days, but rash may last up to 1-2 weeks and in some cases longer

HISTORY HISTORY HISTORY

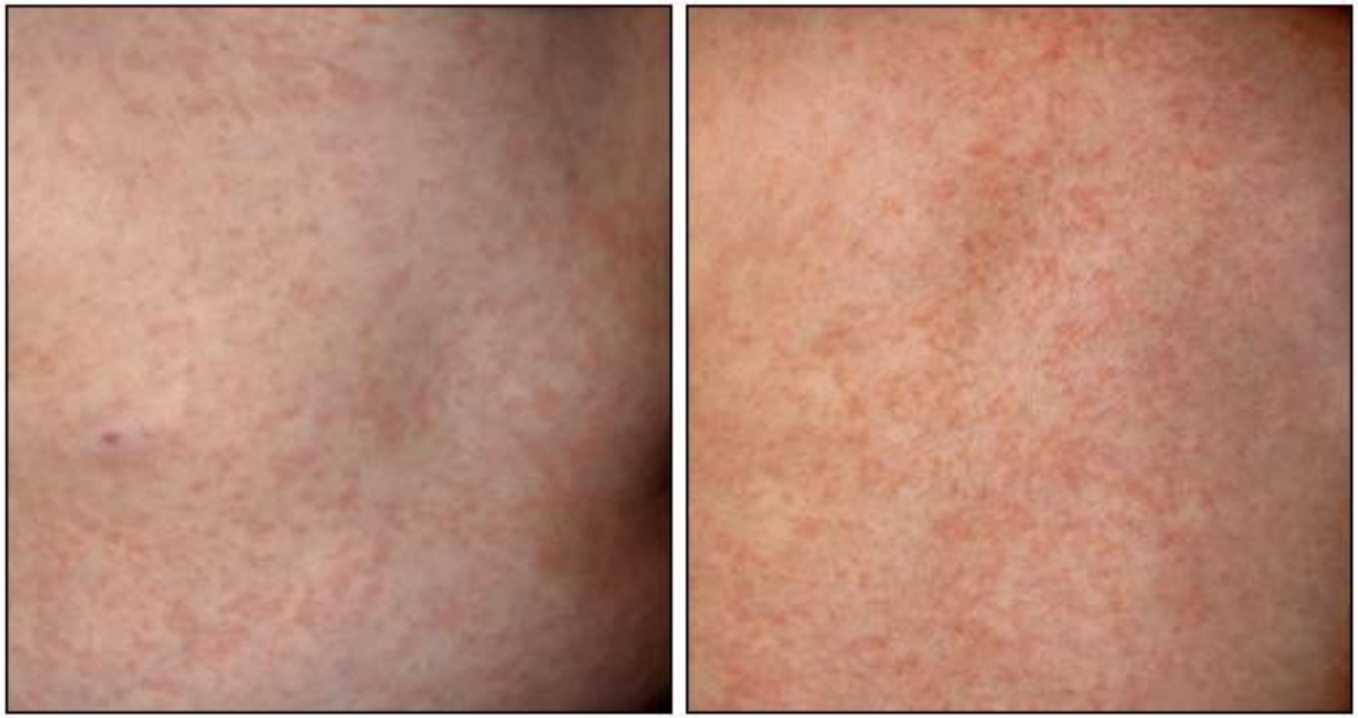
RASHES ARE HARD TO DIAGNOSE AND OFTEN LOOK WORSE THAN THEY ARE

HISTORY HISTORY HISTORY

Get a good history of present illness and associated rash

- Recent illness? Rash started before/during/after illness or fever?
- Contacts irritants or exposures?
- Medications
- Other family members with rashes? (look at those rashes too!)

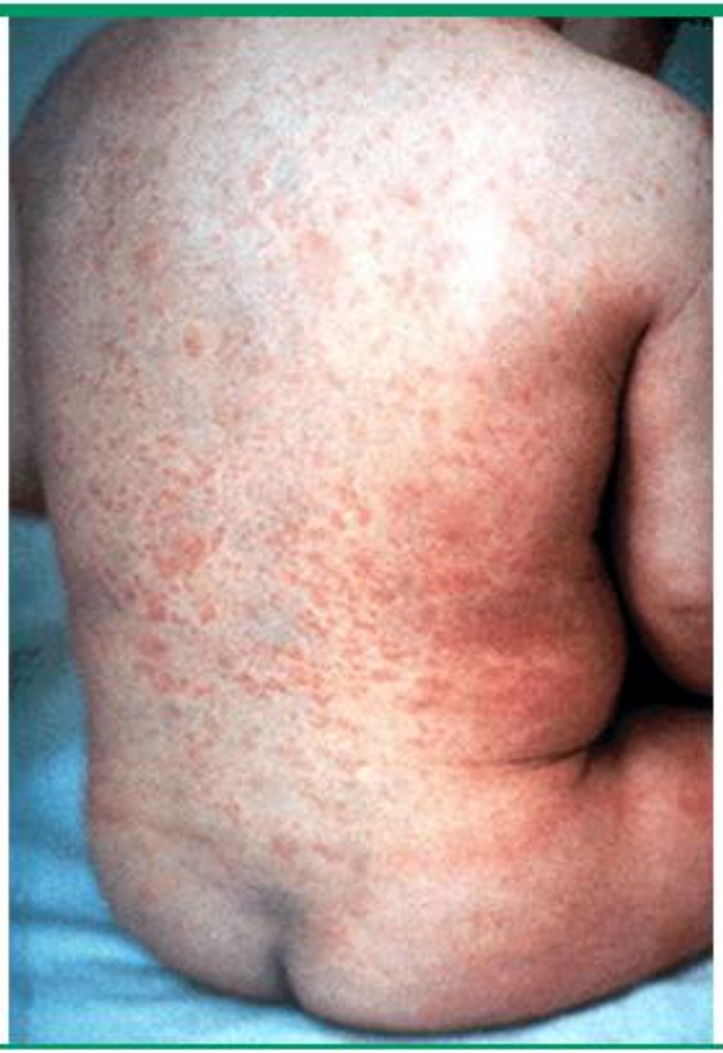
Characteristic roseola rash



The rash of roseola appears as the fever abates. It starts on the neck and trunk and spreads to the extremities. As depicted above, it is erythematous, blanching, and macular or maculopapular.

Courtesy of Michael Brady, MD.

Rubella rash



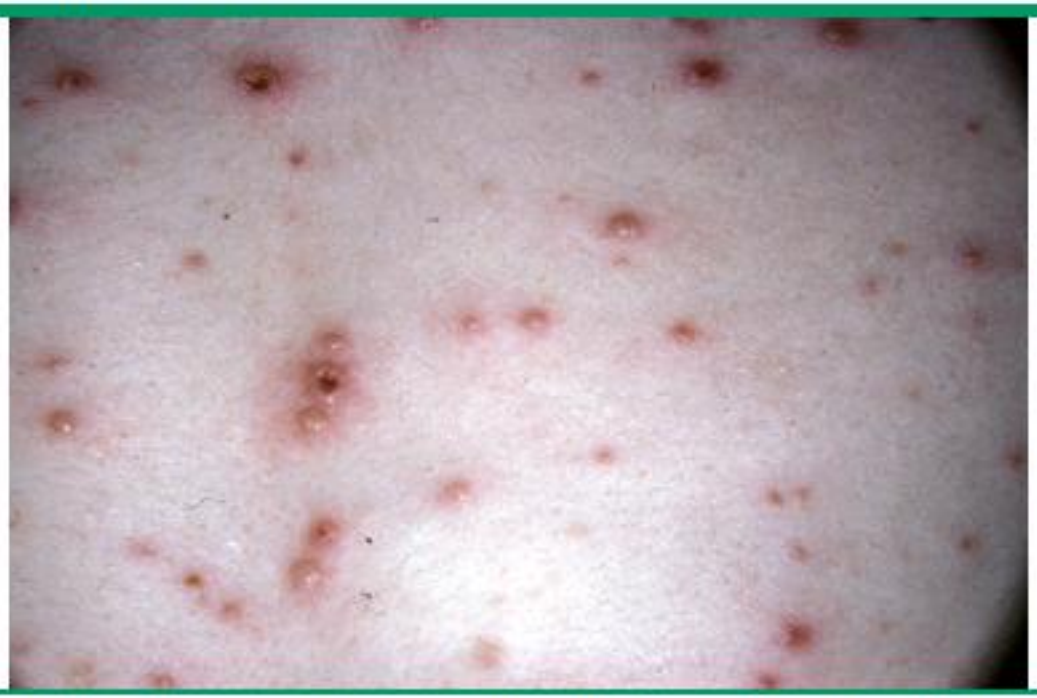
Rubella causes a red rash on the face and body. It is caused by infection with the rubella virus.

Image from: Centers for Disease Control and Prevention.

NOTES

German Measles not seen now with immunizations

Primary varicella lesions

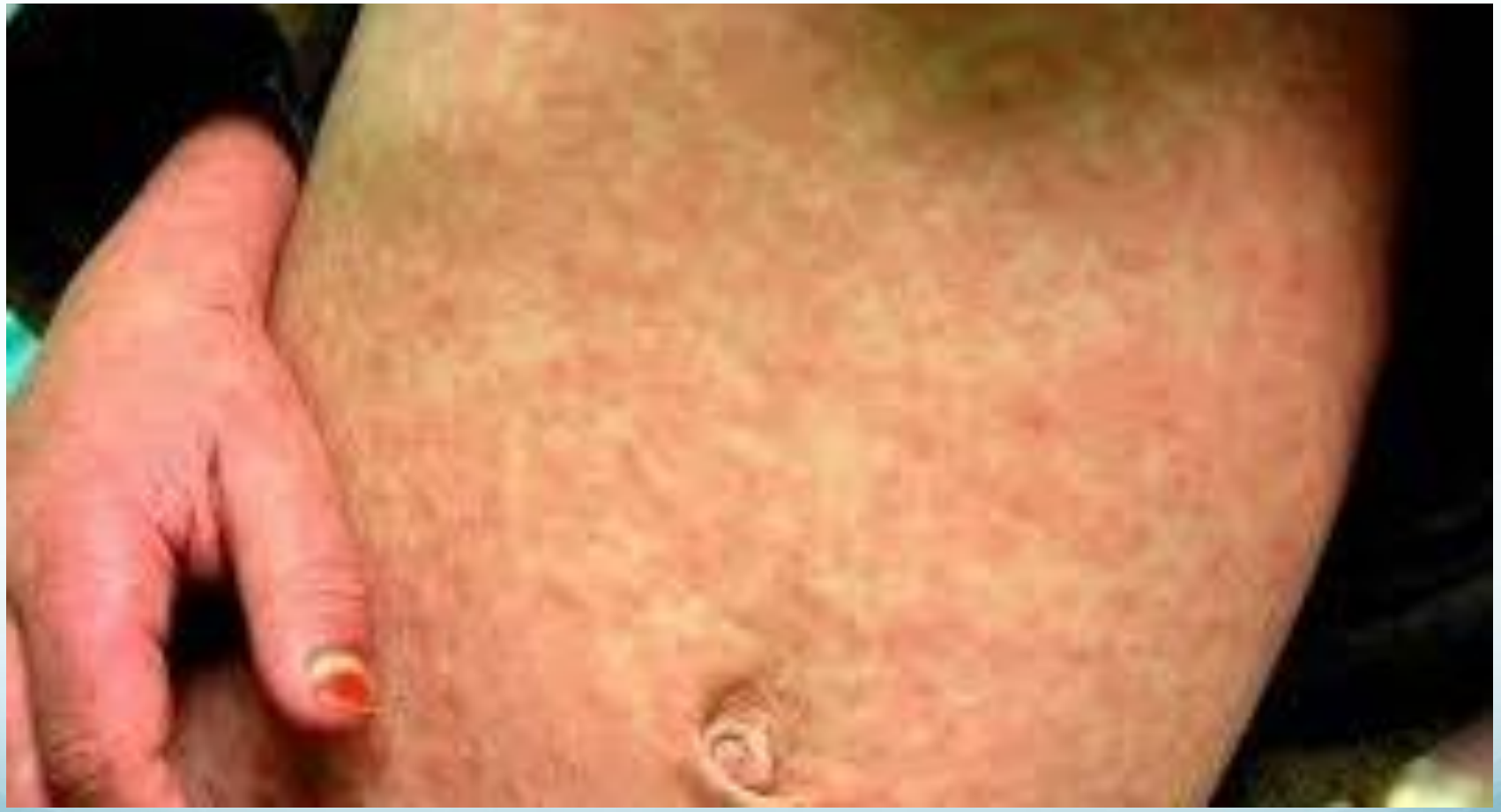


Vesicular lesions on an erythematous base are characteristic of chickenpox. The lesions occur in crops and are present in a variety of stages from maculopapular to vesicular or even pustular. Central necrosis and early crusting is also visible.
Courtesy of Lee T Nesbitt, Jr. The Skin and Infection: A Color Atlas and Text, Sanders CV, Nesbitt LT Jr (Eds), Williams & Wilkins, Baltimore 1995. http://www.lww.com

NOTES

Classic description of the vesicles are “dewdrops on a rose petal”
Occur in crops daily
Present in a variety of stages

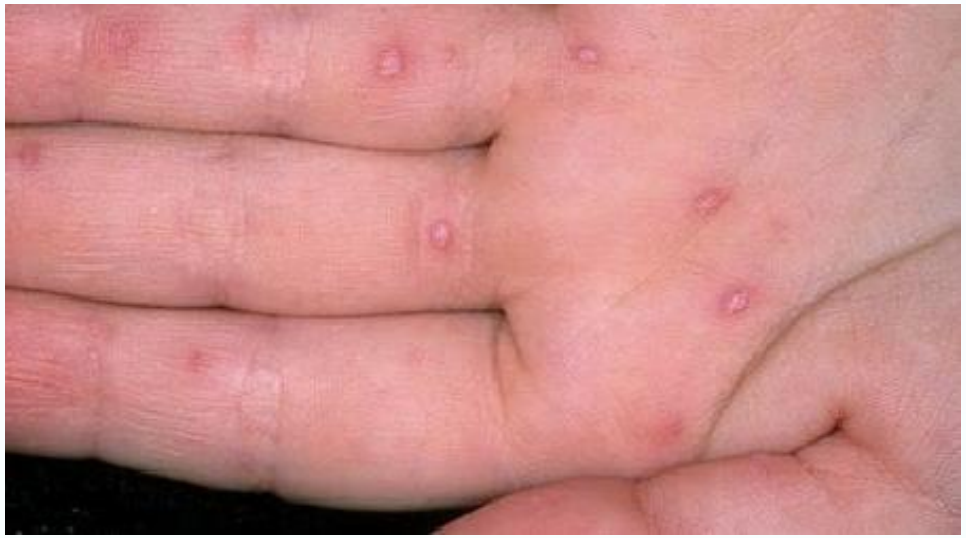
Measles

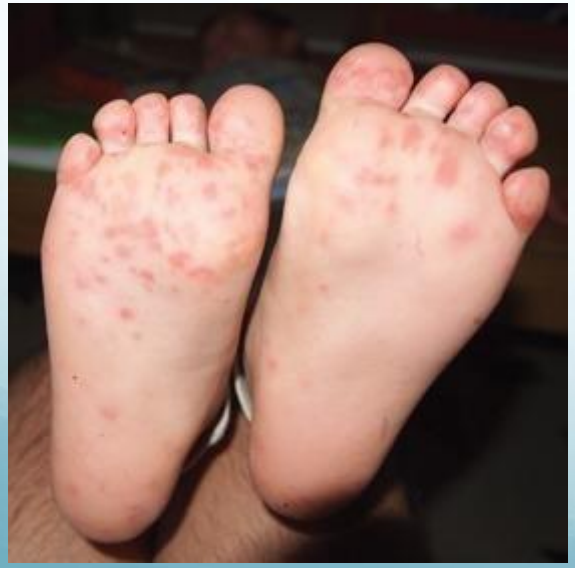


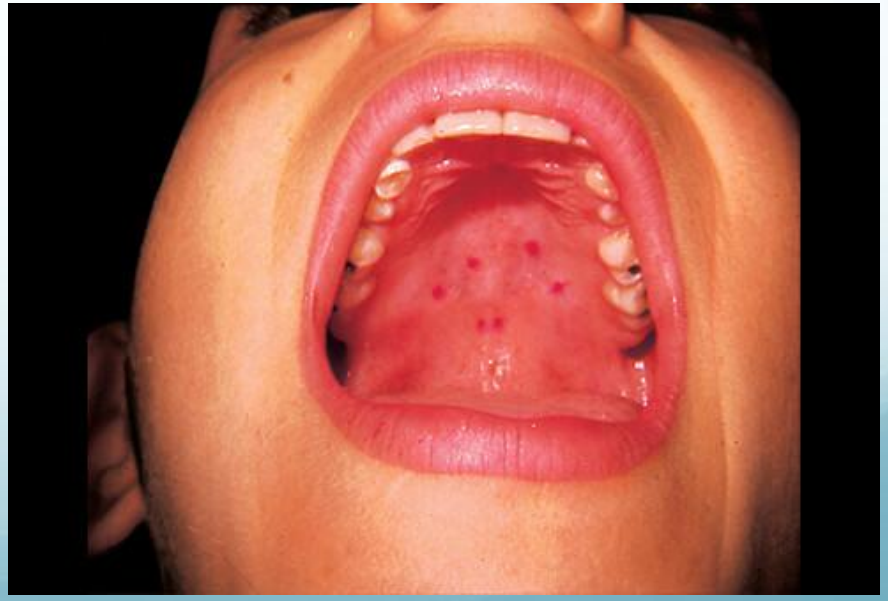
NOTES

Don't see this often any more due to immunizations

Hand Foot and Mouth Disease



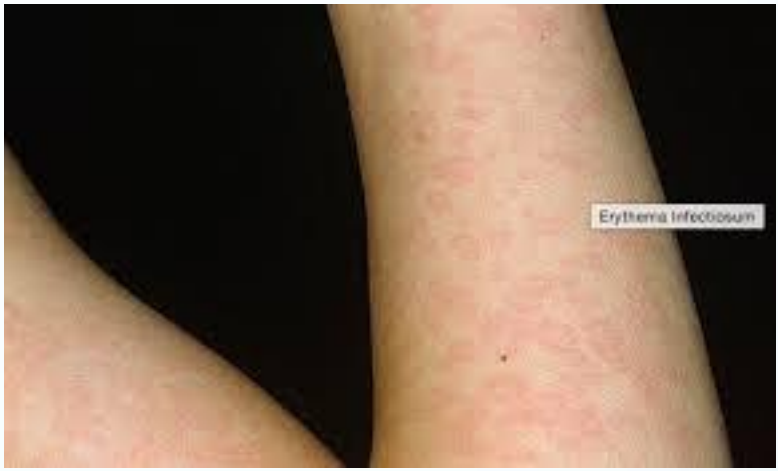


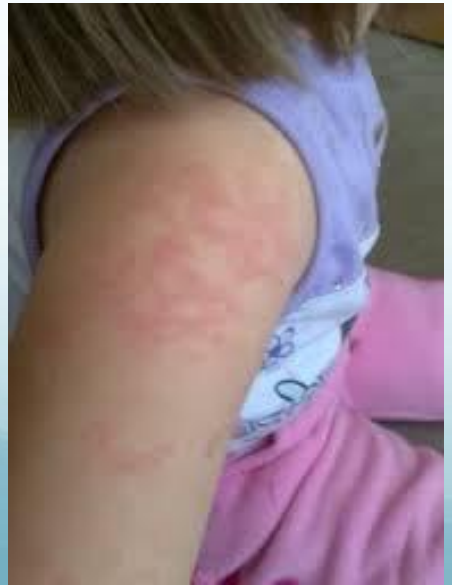


NOTES

HFMD. Coxsackie Virus Can also cause a dense macular papular rash on body and extremities. May have only body rash, sores in mouth, feet or hand involvement or a combination of these symptoms in very non classic presentations.

Slapped Cheek/Fifths Disease



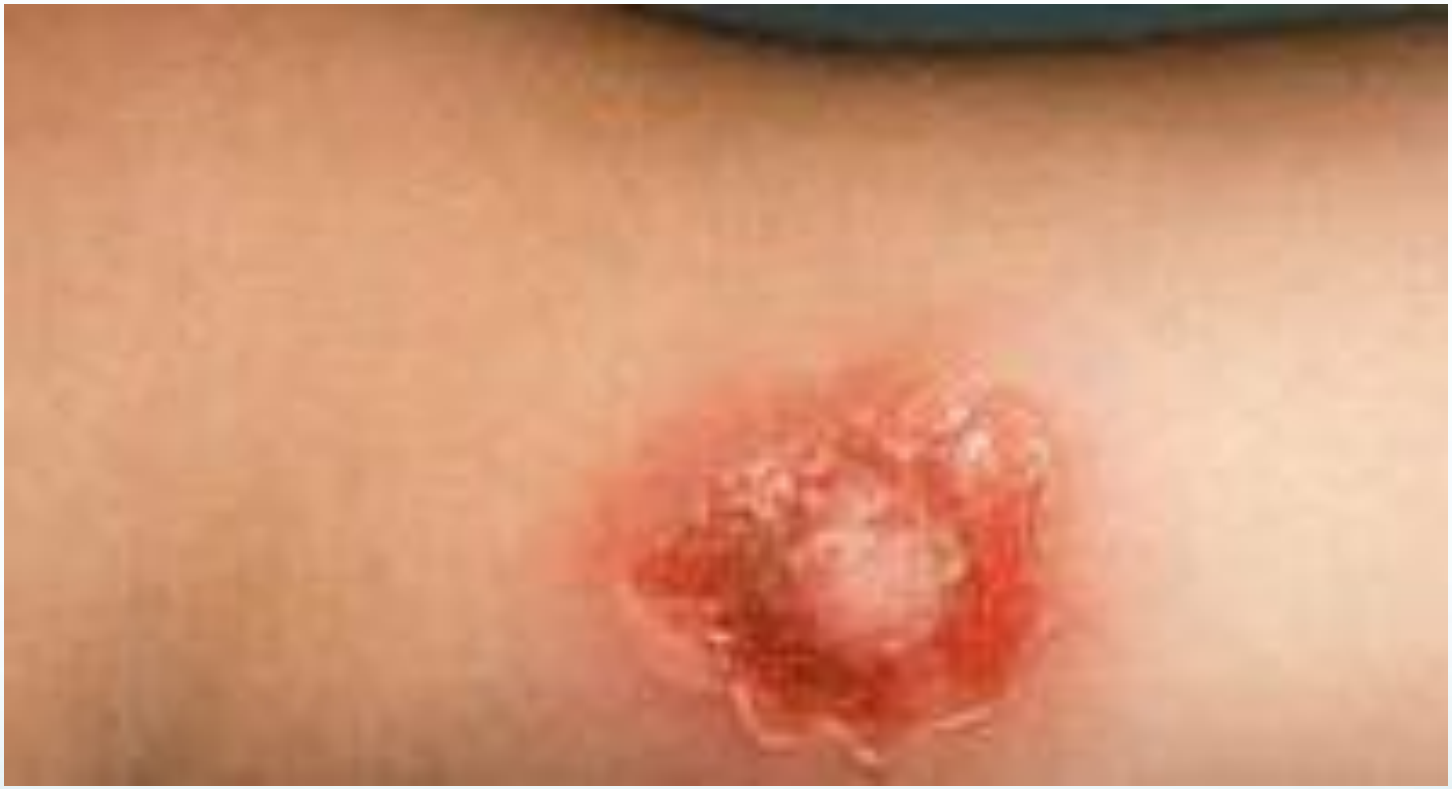


NOTES

Slapped Cheek Disease. Parvo Virus

- Maculopapular rash on trunk and arms.
- Reticulated waxing and waning erythematous giraffe like rash pattern for weeks afterwards that is worse with fever, heat or trauma.

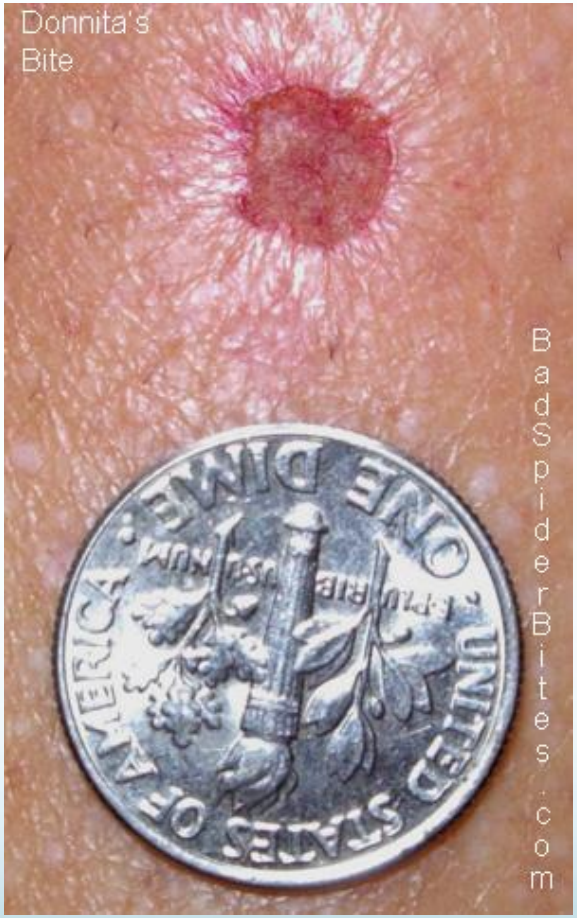
Masqueraders



NOTES

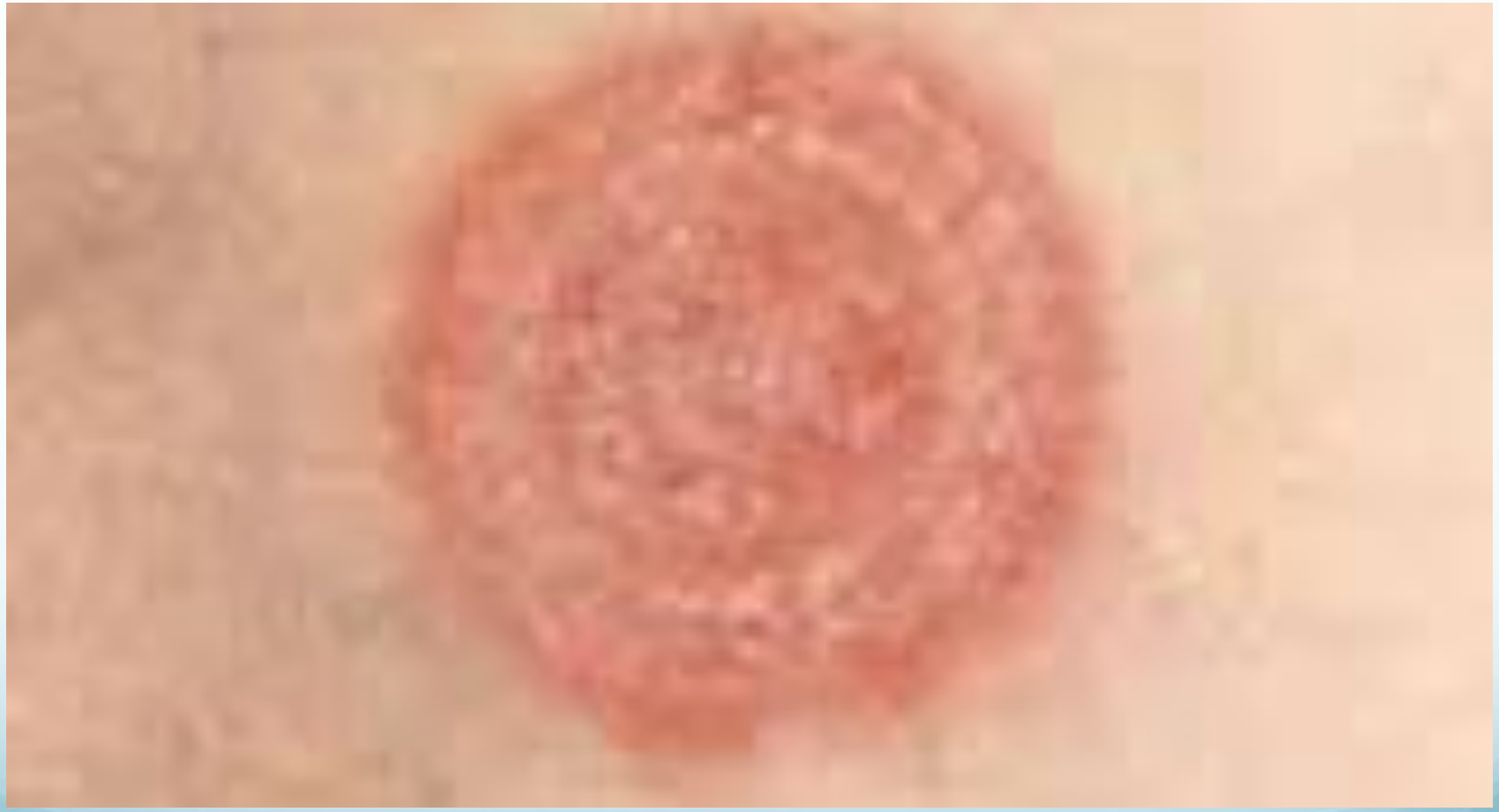
Strep skin infection.
DD: Can look like fungus or cigarette burns

- Slow intense expansion of infection from center out.
- Indolent and ugly.
- Expands with rings.


Donnita's
Bite
BadSpiderBites.com

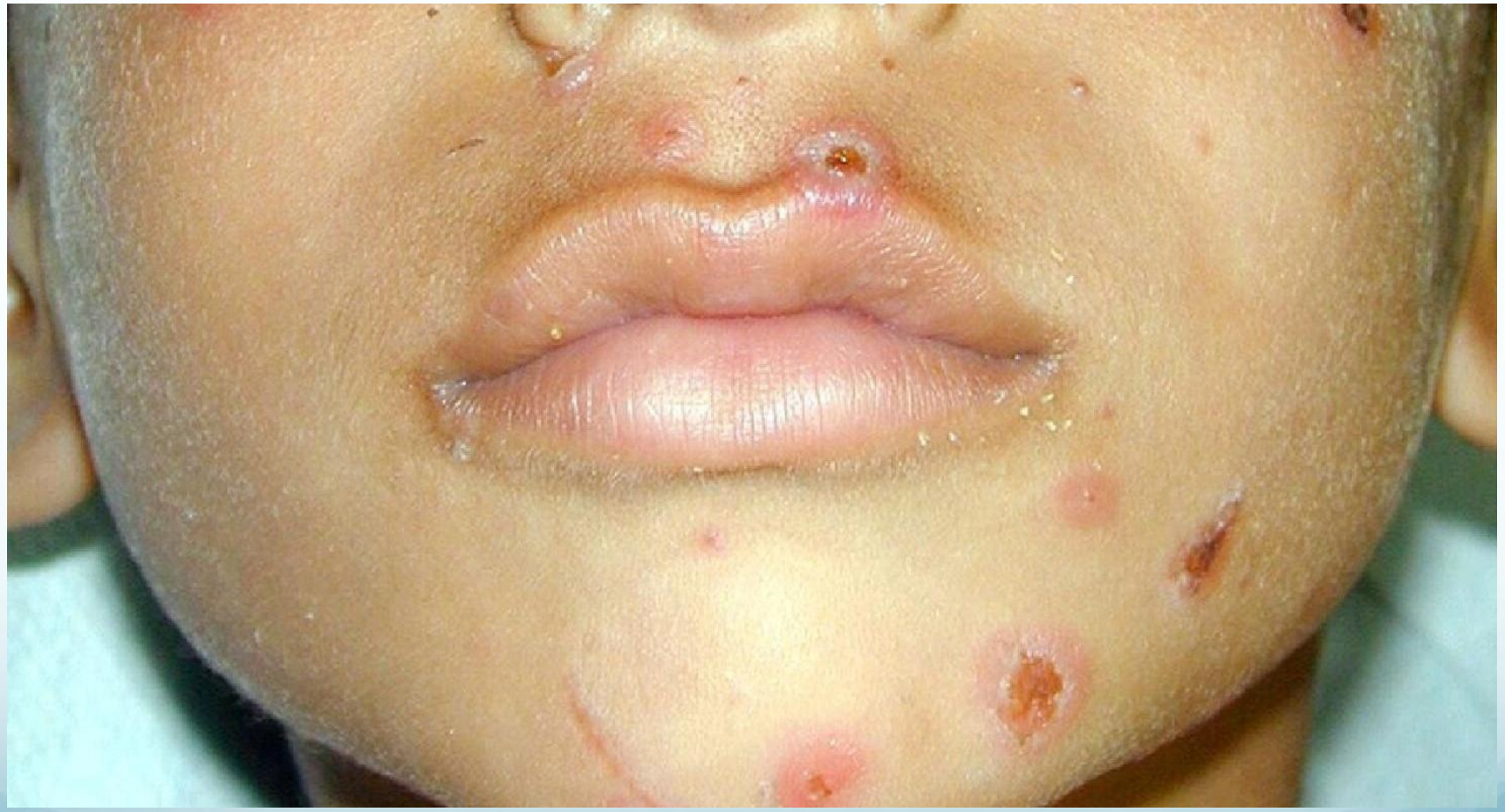
NOTES

Insect Bite.
DD: cigarette burn, impetigo, ulcer, fungal infection cigarette burn



NOTES

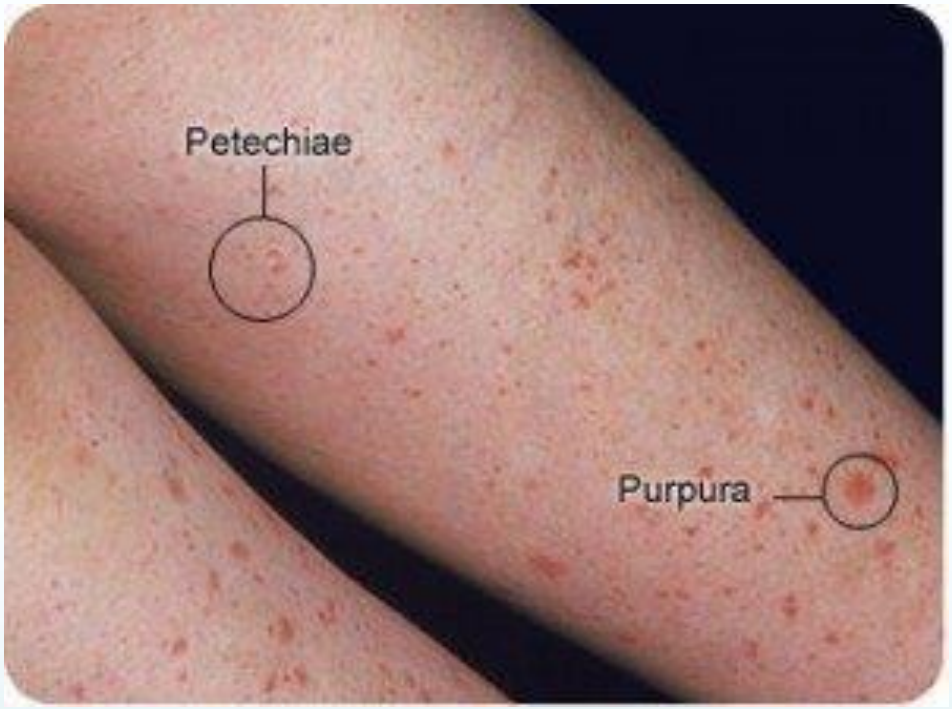
Ringworm
DD: Strep infection, Nummular Eczema, Cigarette Burn



NOTES

This IS cigarette burns.
DD: Strep, Ringworm, Impetigo, Viral Stomatitis

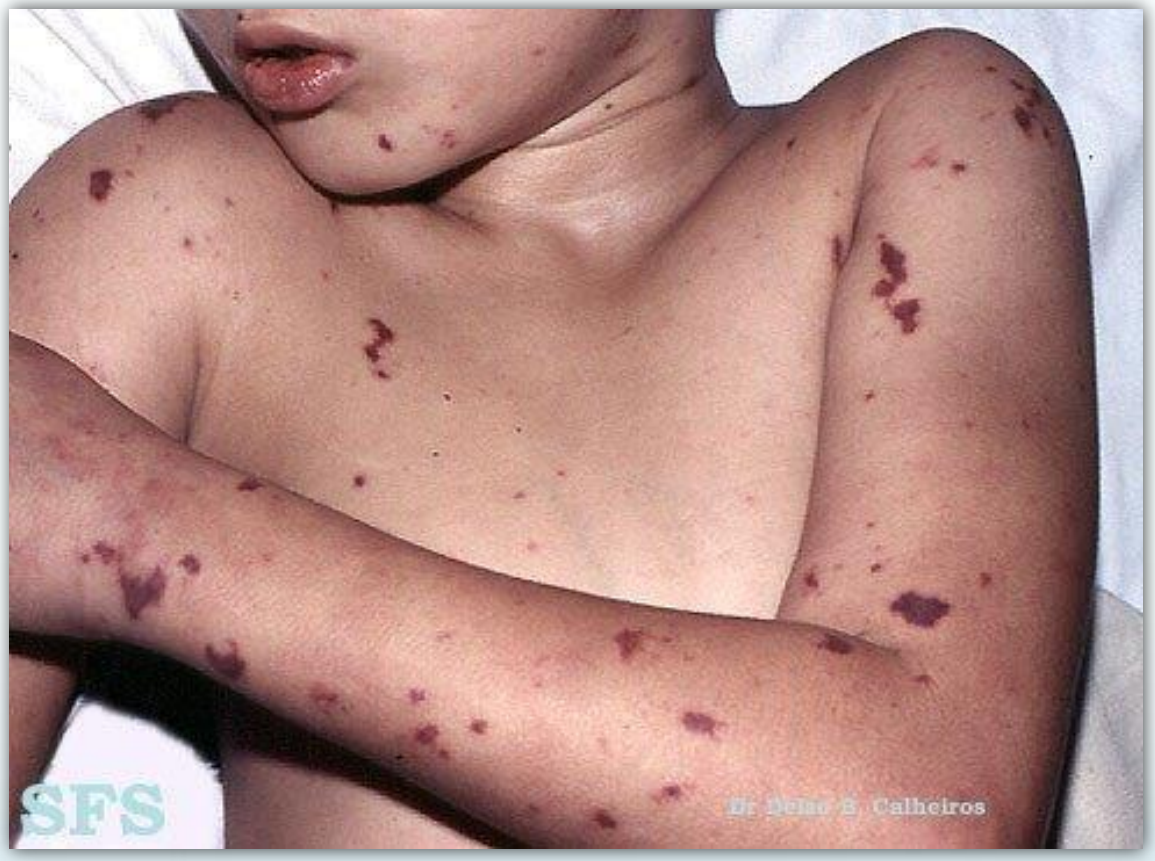
Petechia and Purpura



NOTES

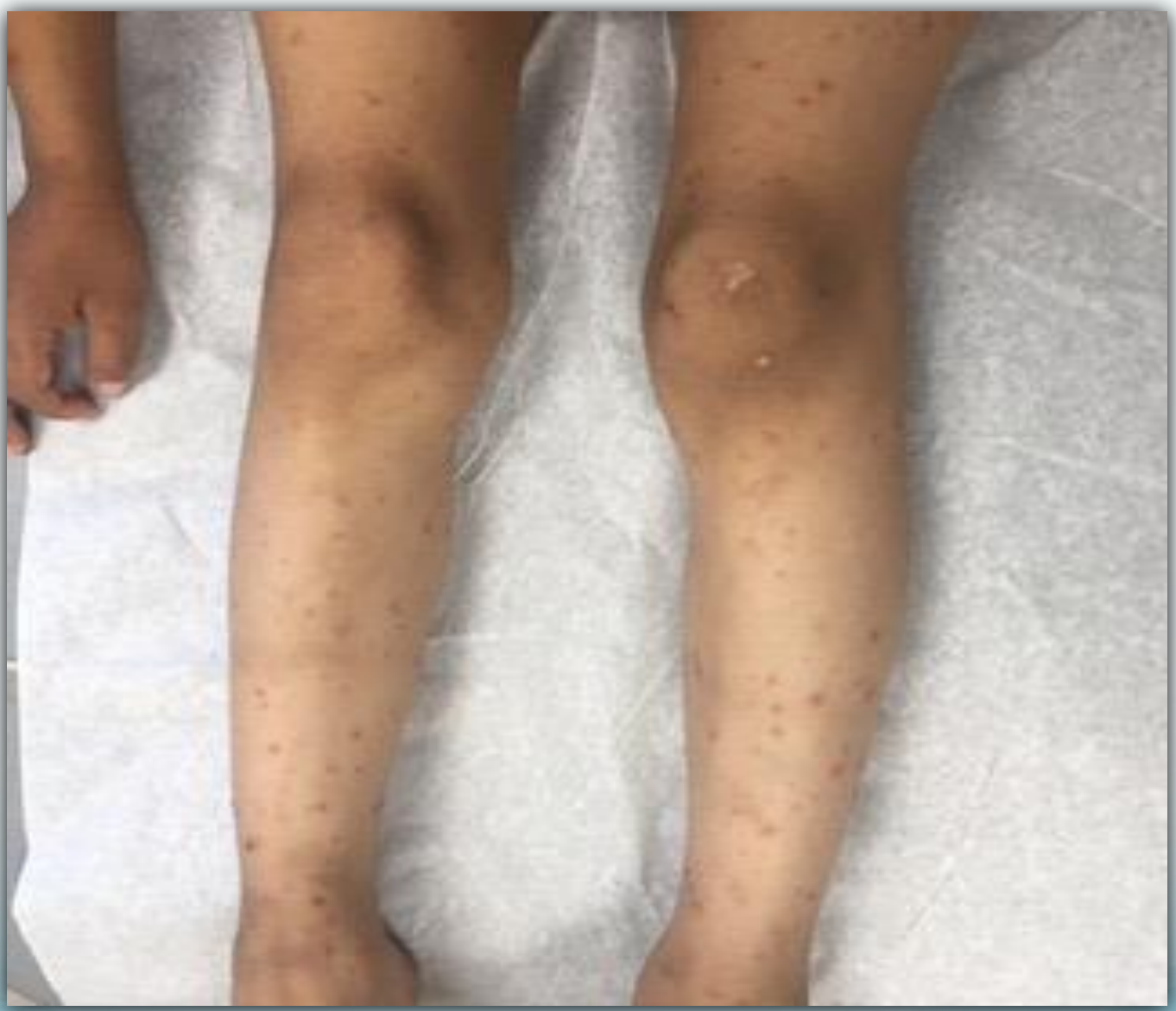
- Non blanching.
- Makes you think of bad things.
- Can be seen with

✓ Meningococcus,
✓ HSP,
✓ Thrombocytopenia,
✓ Disseminated infections/Sepsis
✓ Autoimmune disease
✓ AND in normal kids on face from hard crying or around tourniquet site


SFS
Dr Pedro S Calheiros

NOTES

Meningococcus



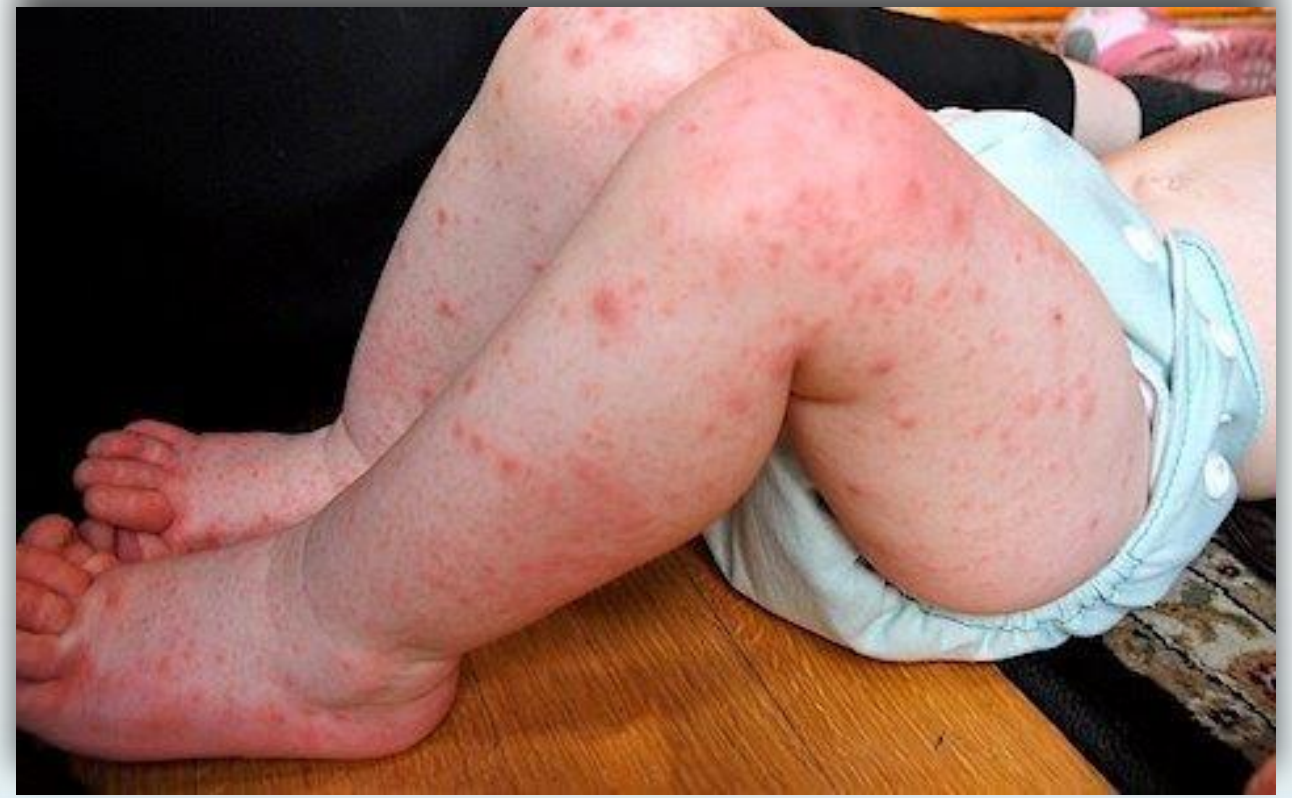
NOTES

HSP. Had abdominal pain and hematuria


%SpO2
BPM
PERIODIC MAINTENANCE

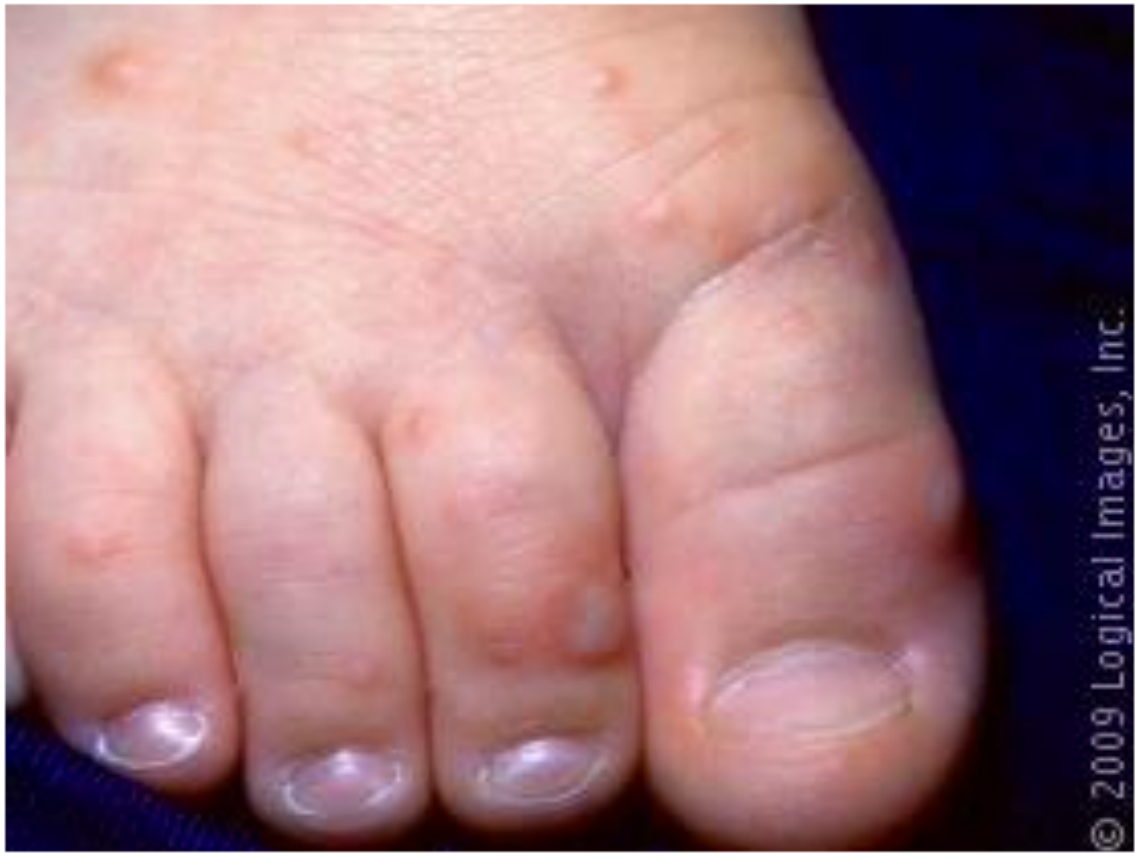
NOTES

H Flu A Sepsis/Shock



NOTES

HFMD

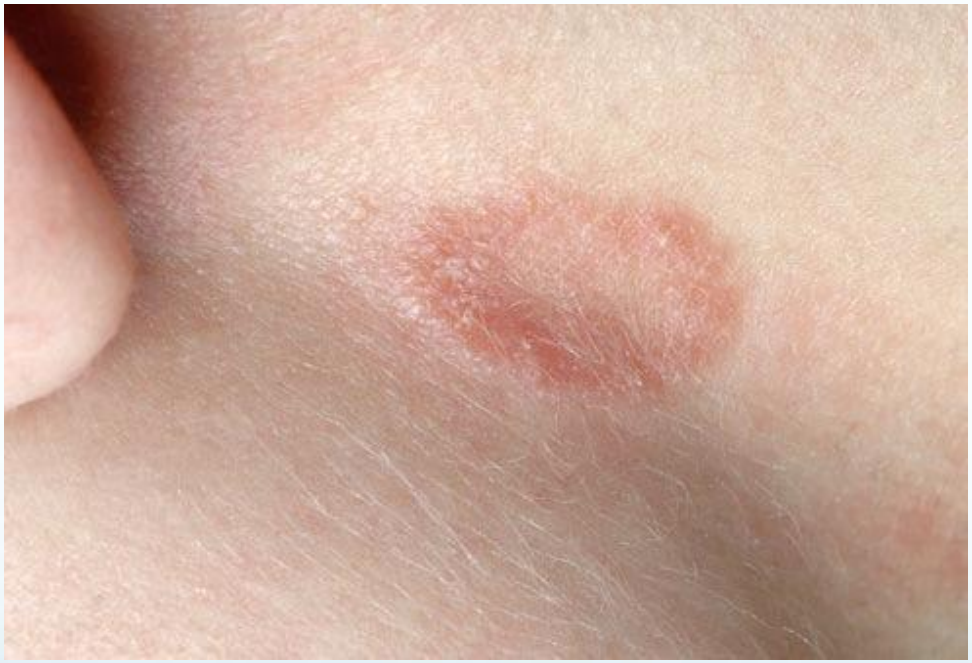

© 2009 Logical Images, Inc.

NOTES

HFMD.
About a month after HFMD, affecting the hands and feet, there can be cracking, peeling and loss of nails. Usually they grow back ok…

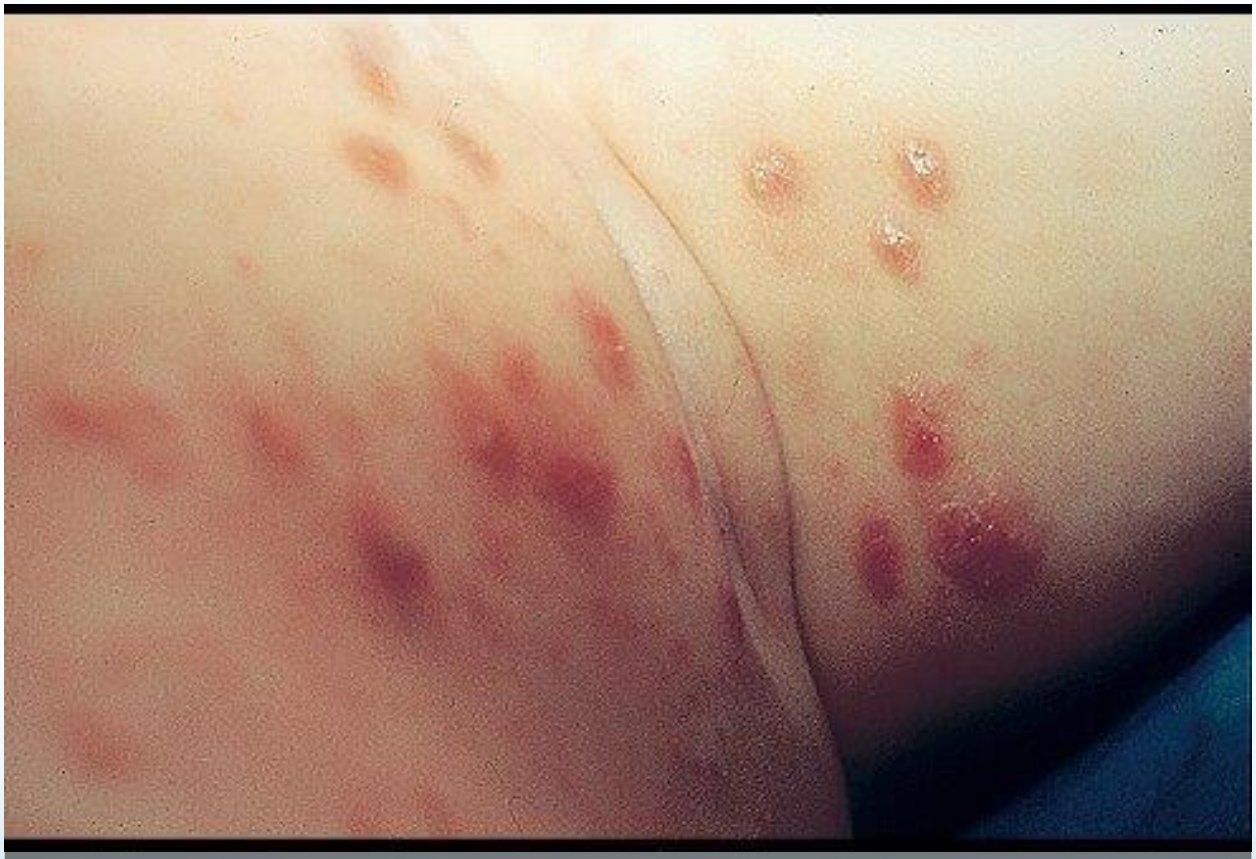
NOTES

Rapidly progressive skin infections with lymphangitis are usually strep



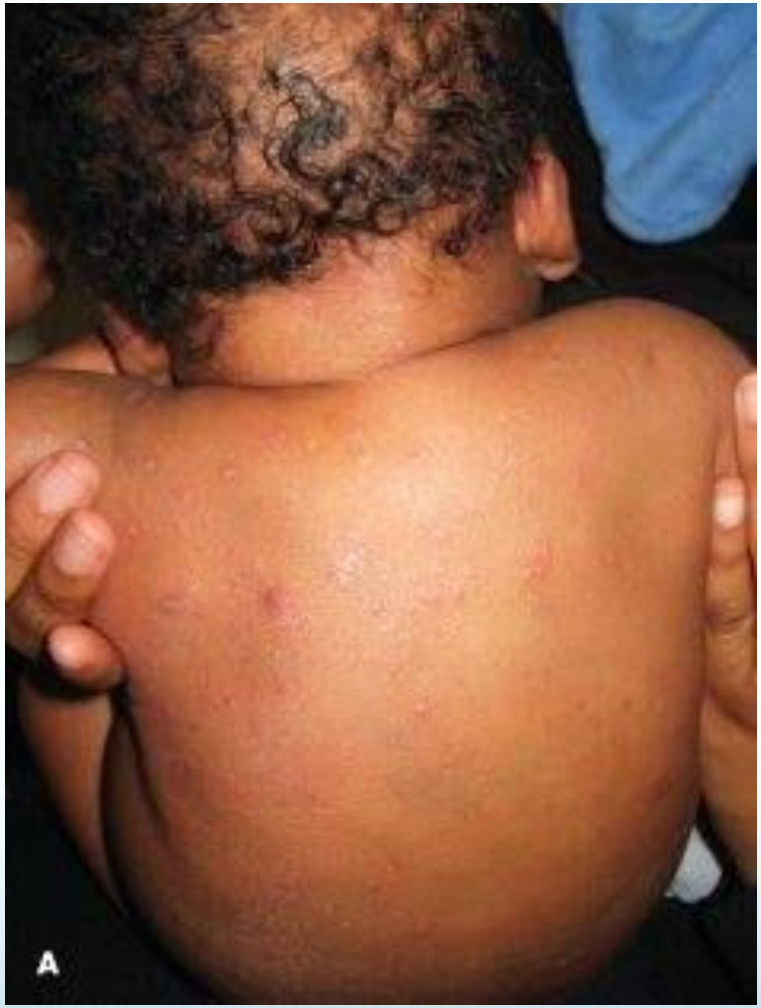
NOTES

Ringworm.
DD: Nummular eczema, healing cigarette burn, impetigo



NOTES

Scabies.
DD: Chickenpox, Impetigo, HFMD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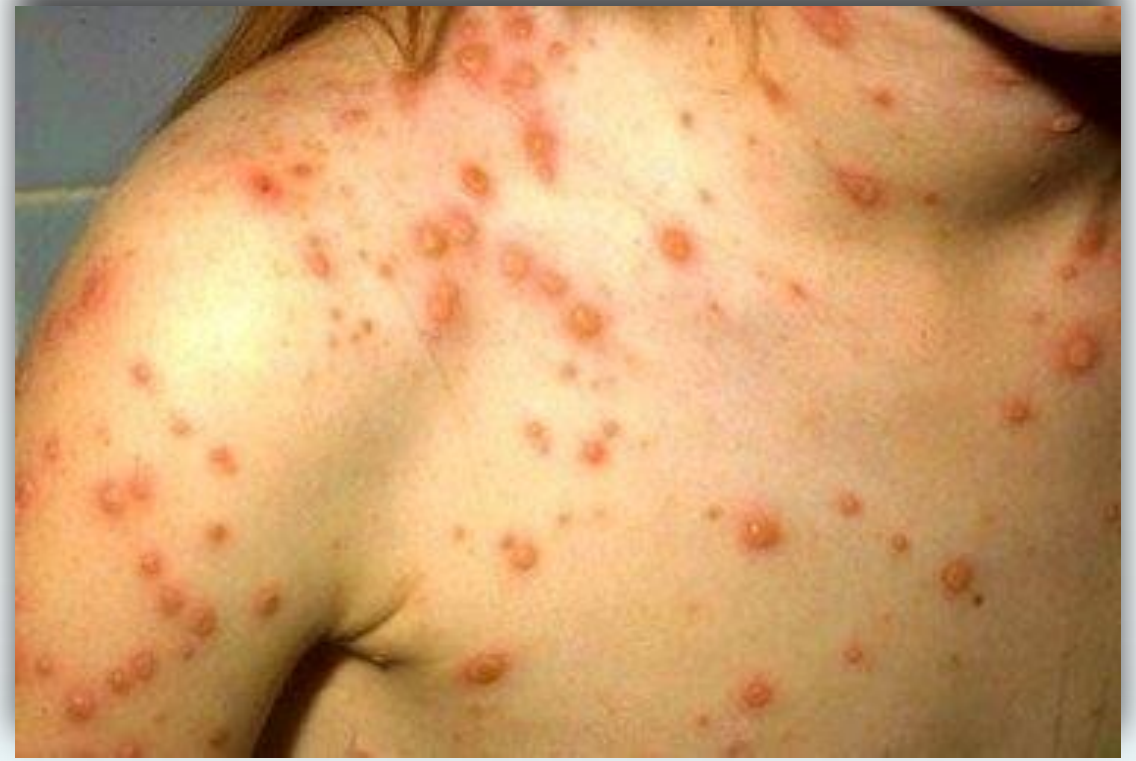
NOTES

Scabies.
DD Chickenpox, Impetigo

- Scabies distribution is different in young children.
- Often under arms and on trunk and back.
- Caretakers with scabies are picking them up and exposure occurs repeatedly in this area.



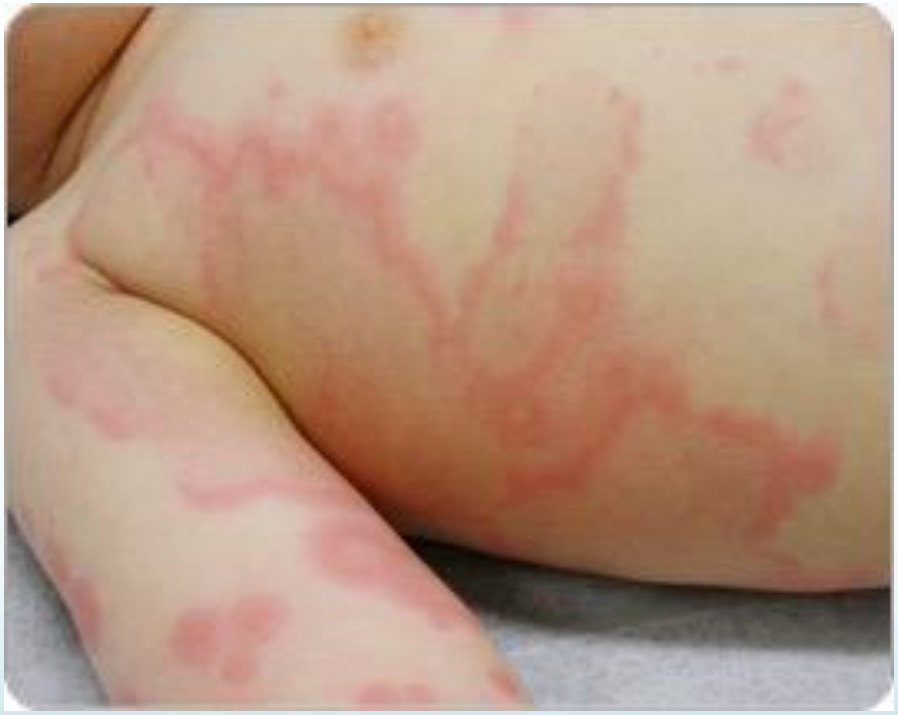
NOTES

Chickenpox.

- Dewdrops on a rose petal.
- Varying stages of healing with some new juicy ones.
- Very contagious. Get good history and a 2nd and 3rd opinion
- Isolate

Do put patient on a plane or bring them to the clinic/hospital if you really think it is chickenpox (which it usually is not).

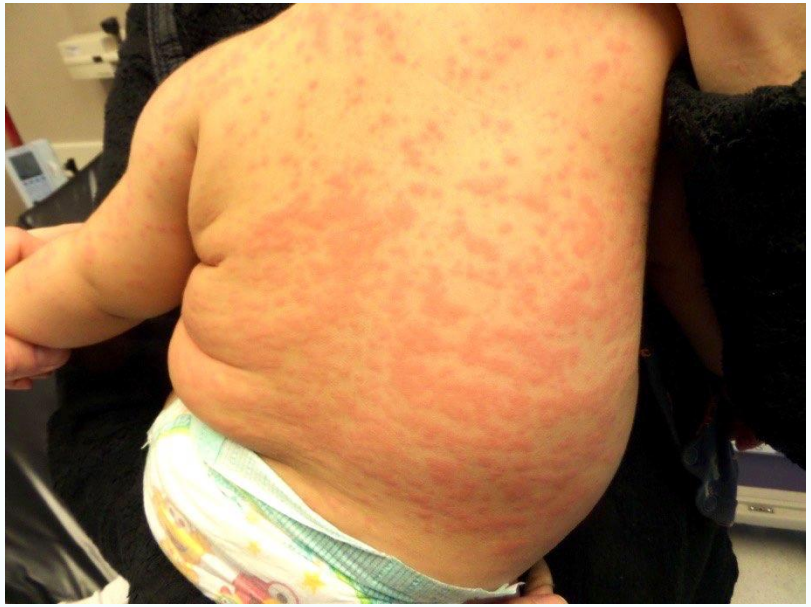
- Order viral kit from lab, open and obtain fluid from vesicle.
- Supportive care.
- Report if viral culture positive.
- Do not obtain IGG/IGM. Not reliable and no true IGM cut off for active infections.
- Several in our region were reported as positive based on this test, but literature does not support using IGM testing for verification.
- Use viral swabs!!!

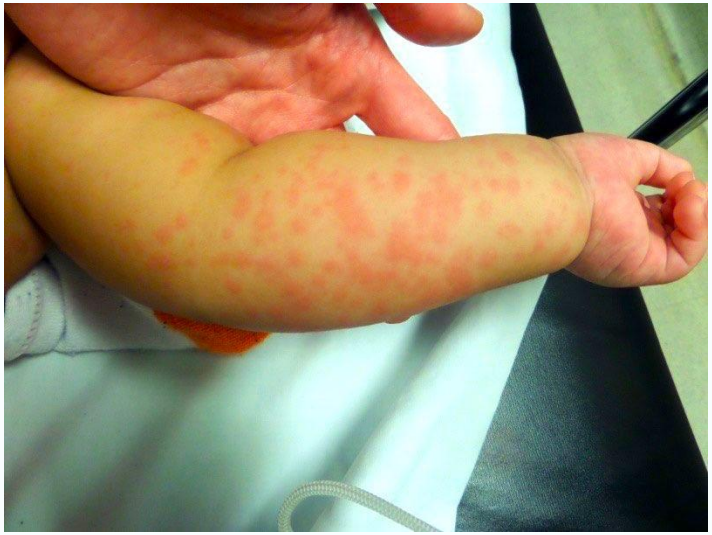


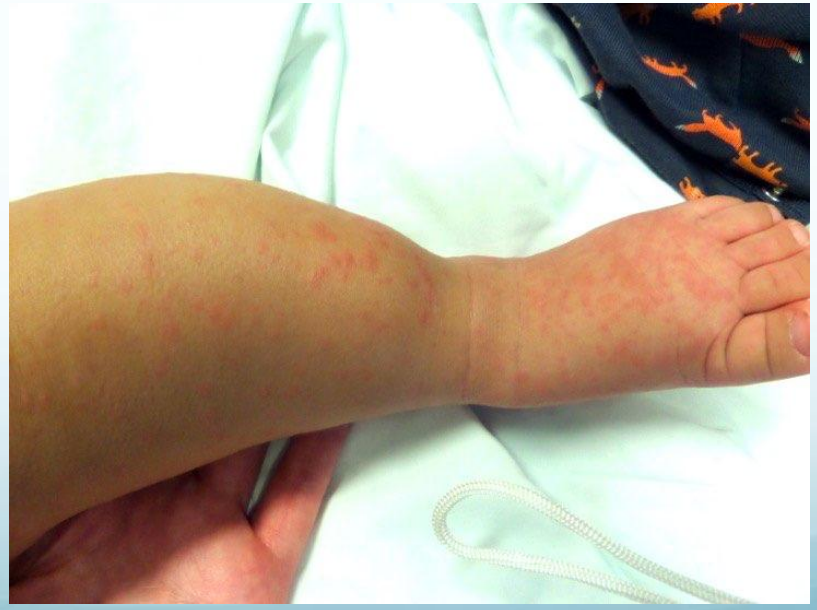
NOTES

Erythema Multiforma.
DD: hives, Stevens-Johnson, Post viral, post antibiotic…usually delayed sensitivity reaction.

- Scary looking.
- Usually flat.
- Sometimes raised edges.
- Serpigenous and moves and changes shape.
- Worse with fever or heat.
- Waxes and wanes.
- Not usually itchy, but can be.
- May have joint swelling
- May have fever or h/o fever.

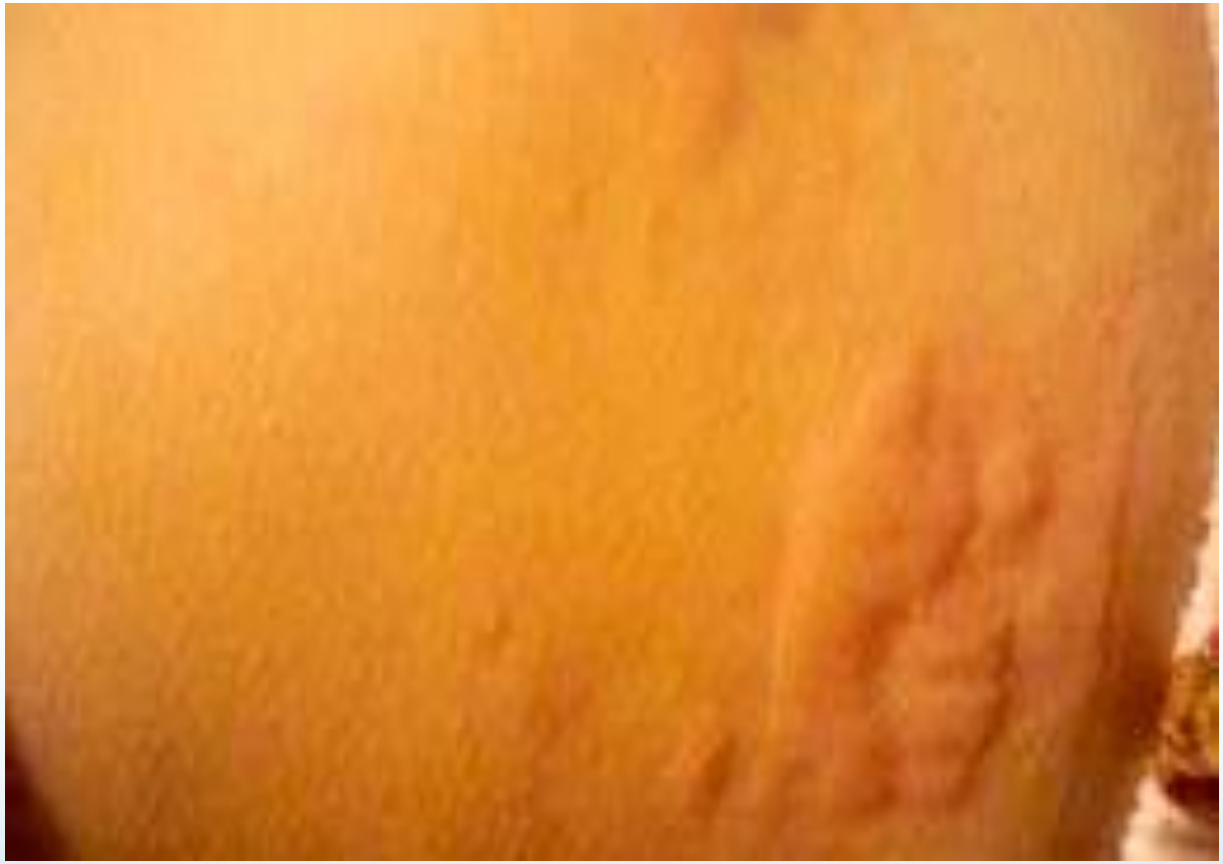






NOTES

Erythema Multiforma
DD: Stevens Johnson, Lupis or other autoimmune disease

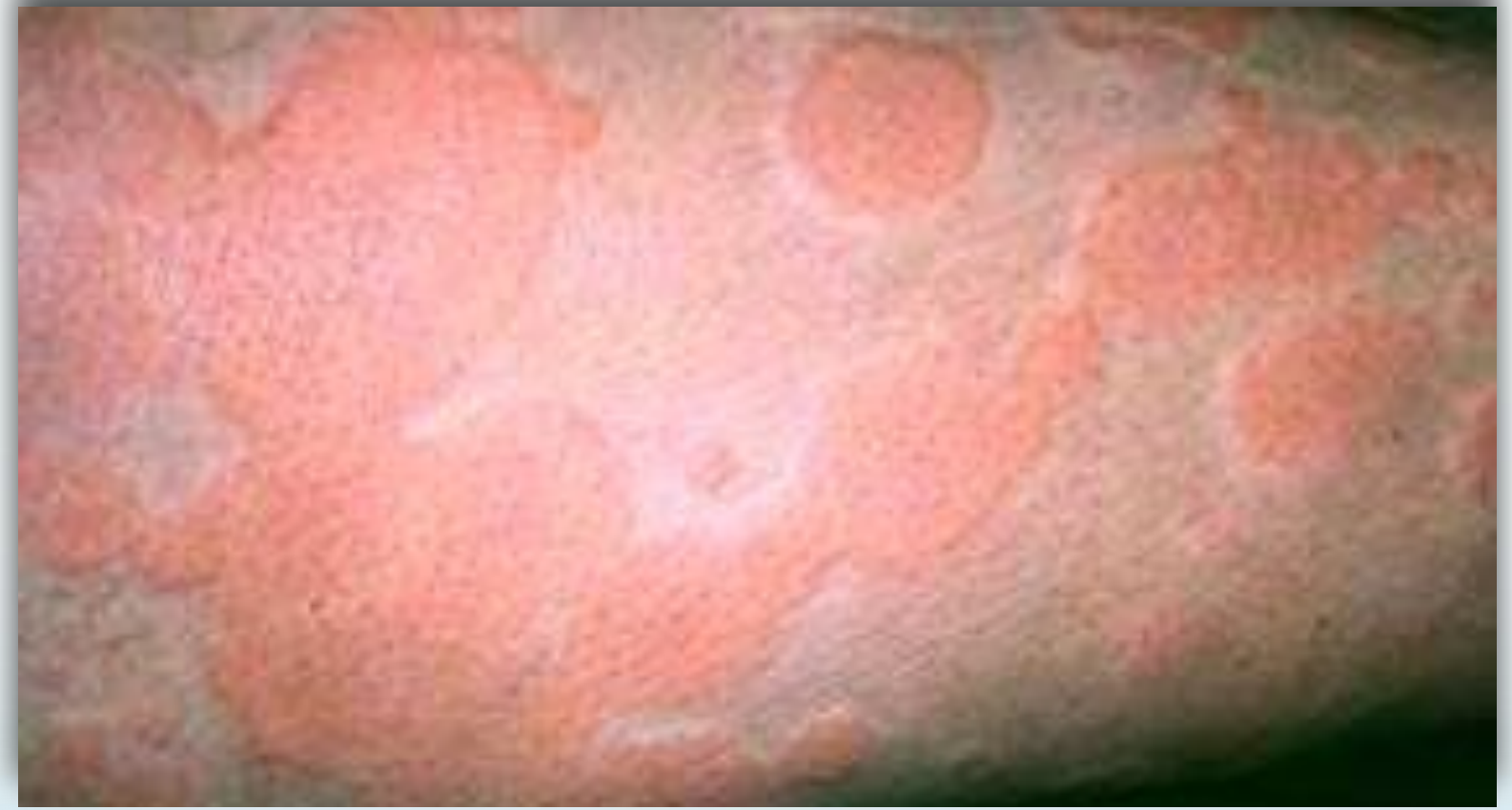


NOTES

Hives.

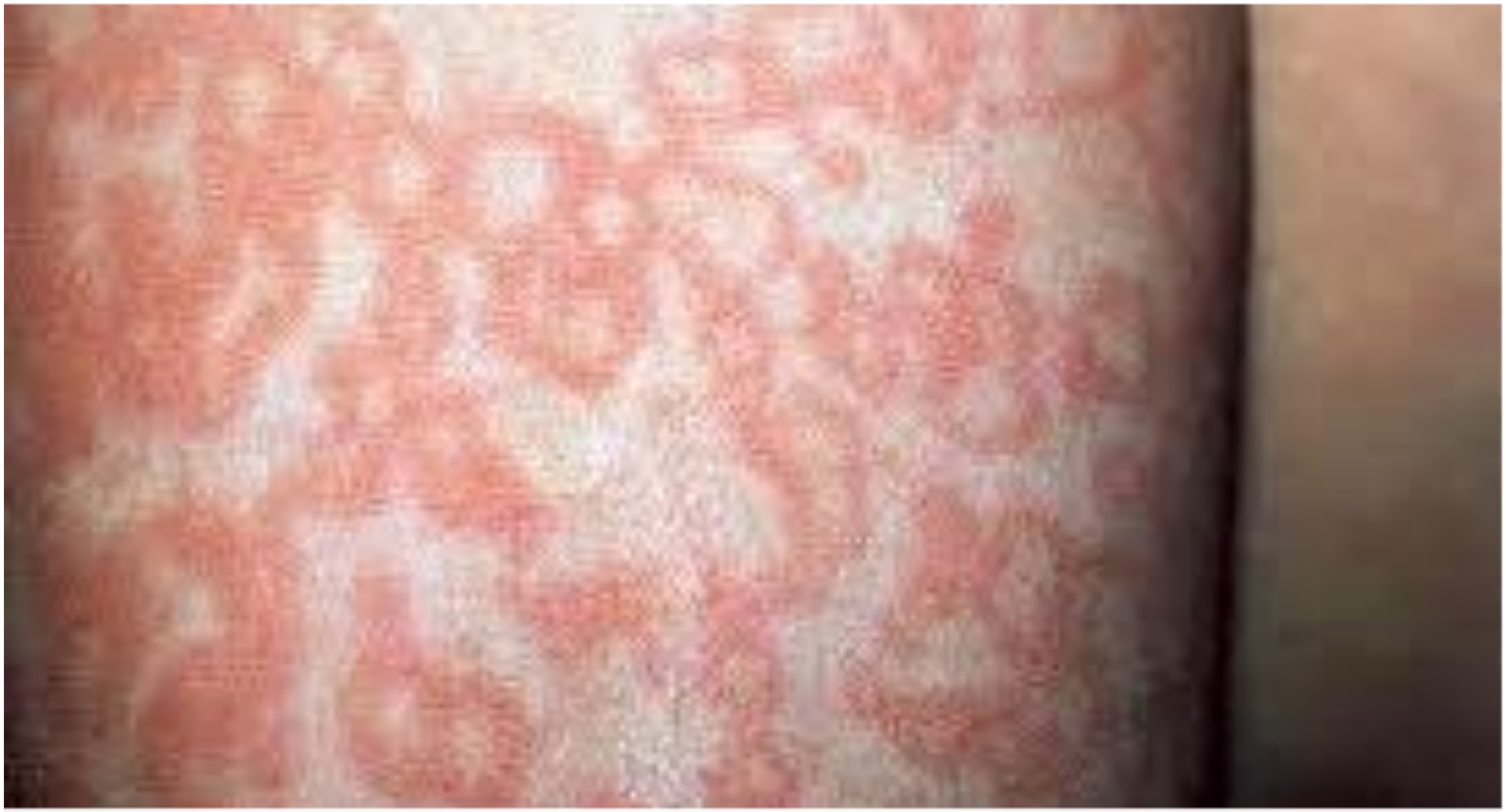
DD: Erythema Multiforma

- Red raised itchy
- Move around
- Come and go
- Wax and wane more dramatically than Erythema Multiforma
- Irregular largish raised lumps/welts
- Benadryl helps
- Last for up to a week or more
- Often recurrent
- Not associated with joint swelling
- Mostly unknown cause but can be related to food, contacts, meds or cold



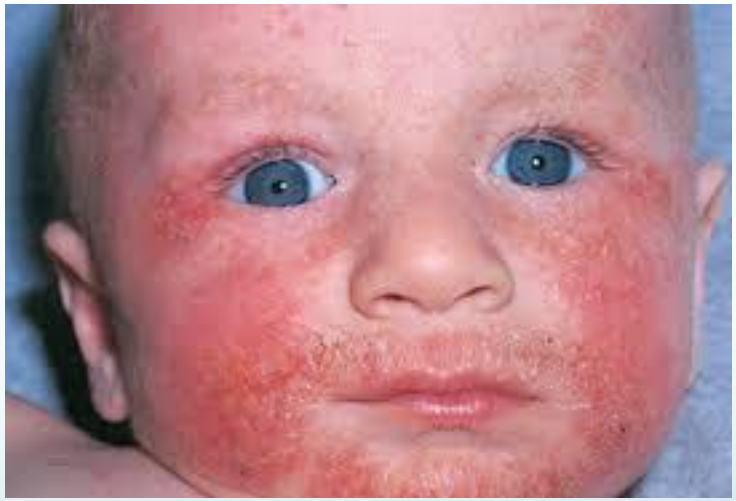
NOTES

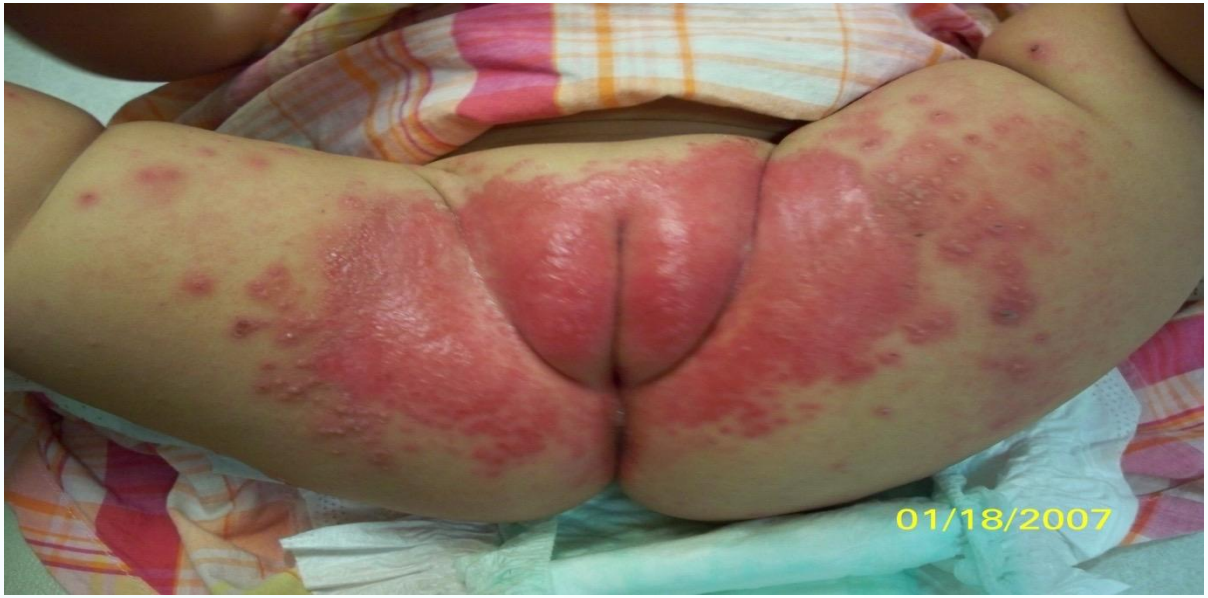
Hives.
Looks like EM, but itchier, more raised, comes and goes more dramatically, better with Benadryl!



NOTES

Slapped Cheek Disease.
Reticulated red lacy rash usually on the arms and legs.
Waxes and wanes and lasts up to 1-2 months.
Fades and reoccurs with heat, vigorous exercise and trauma

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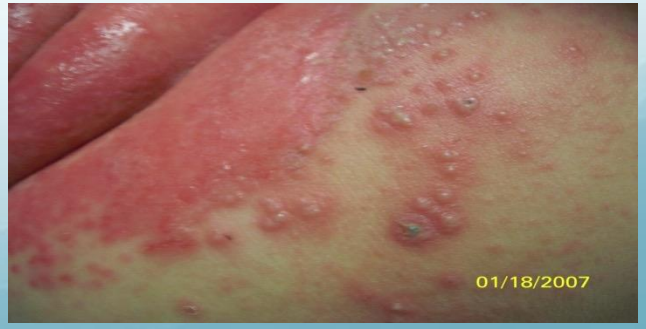

01/18/2007

NOTES

Perianal Streptoccocal Diaper Derm
DD: Yeast Diaper Derm

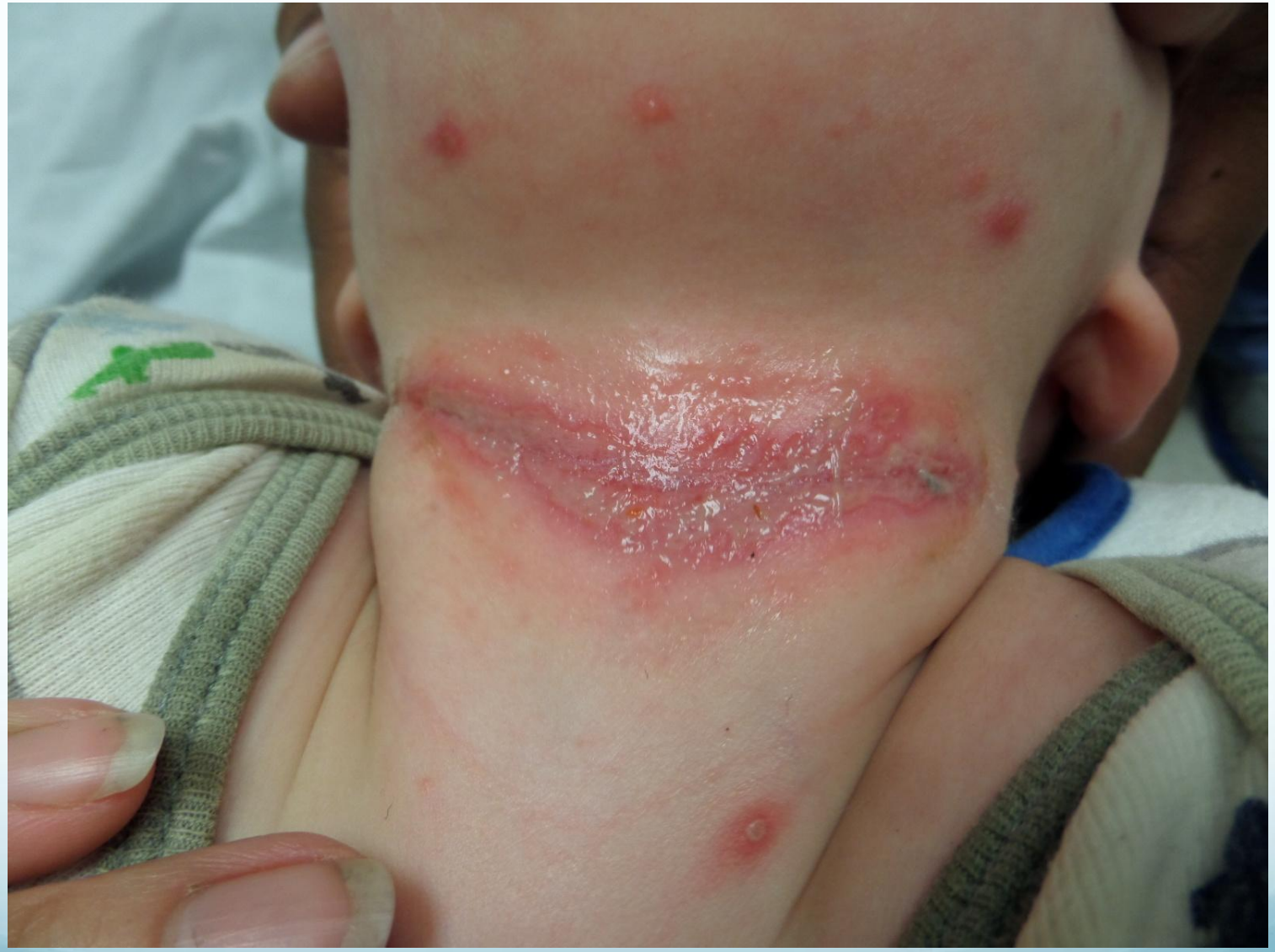
- Small baby.
- Bad rash.
- Improved with Keflex (chosen due to recent amoxicillin use and good skin/soft tissue penetration).
- Got better.
- Yay.

NOTES

Yeast Diaper Dermatitis.
Creases affected and satellite lesions
Can become confluent with severe cases and look just like a bad bacterial rash

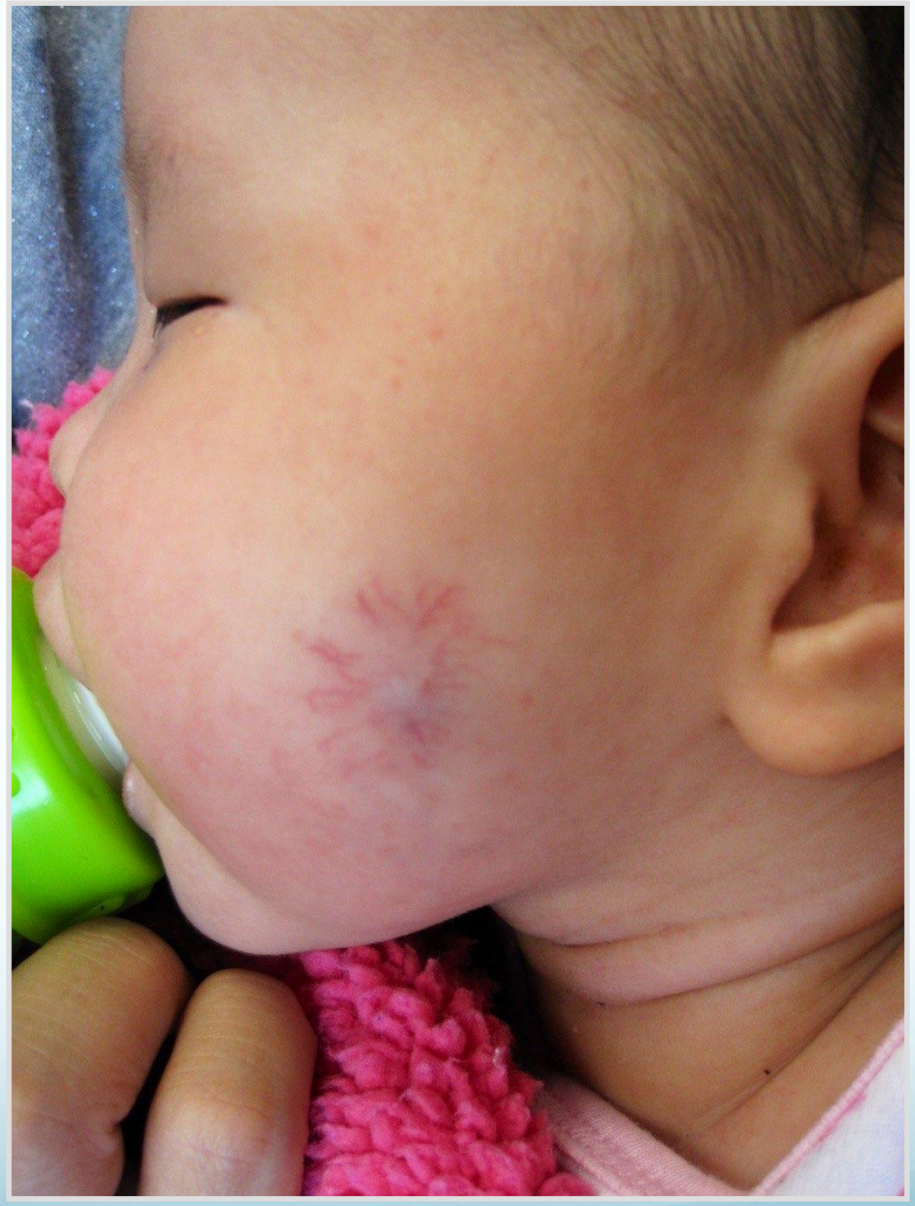
NOTES

Yeast Diaper Dermatitis.
DD: Bacterial or Contact Diaper Dermatitis
Consider Diflucan



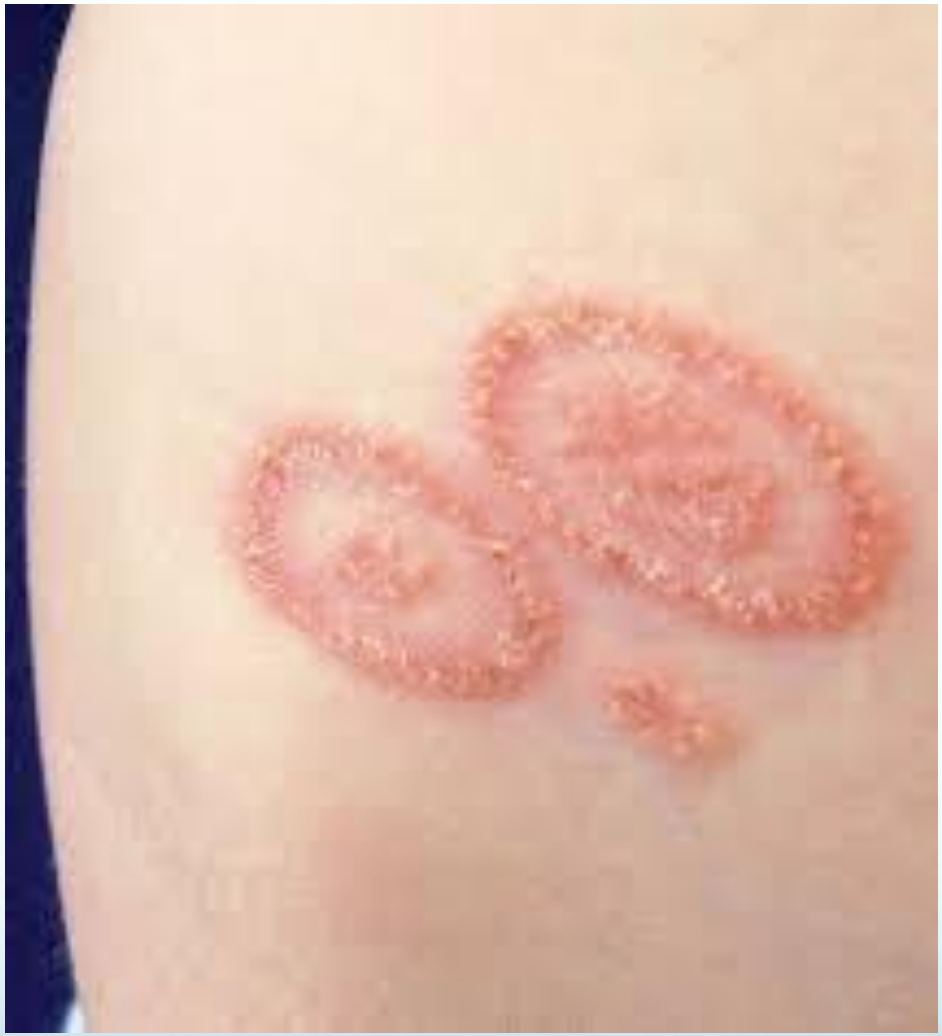
NOTES

Intertrigo
Keep Area Dry…GOOD LUCK!
Rinse and blow dry on low warm blow dryer setting 4-6x/day
Try fungal powder (instead of Nystatin Cream)
Consider Diflucan if all else fails...



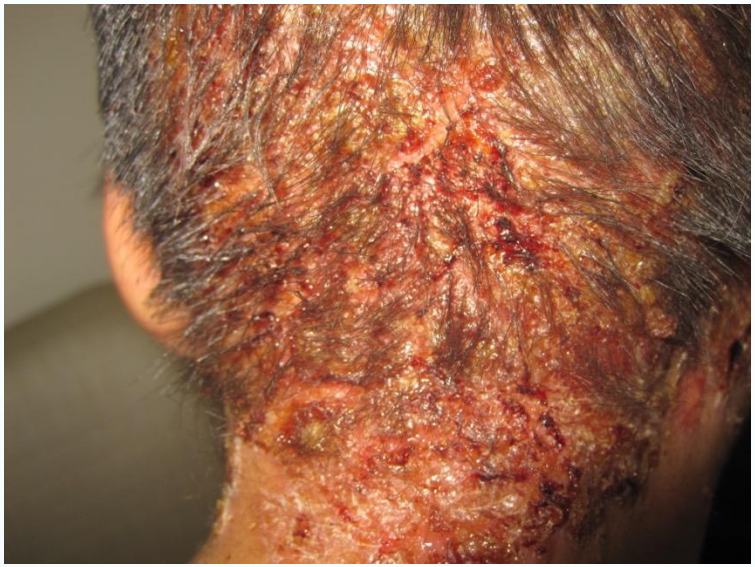
NOTES

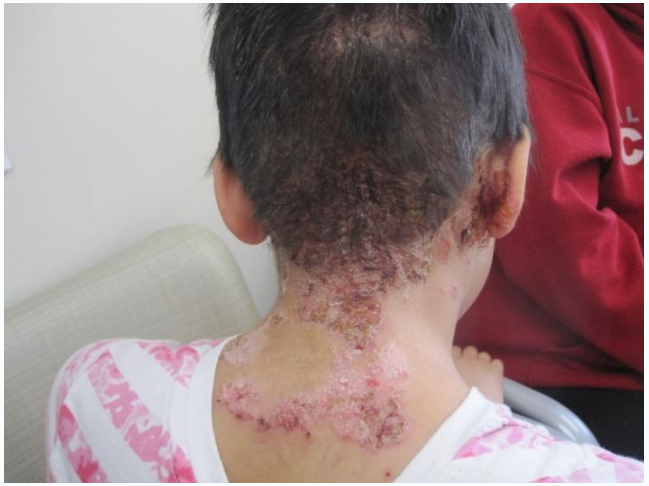
Cheek Hemangioma.
Admitted and started on propranolol.
Doing well.

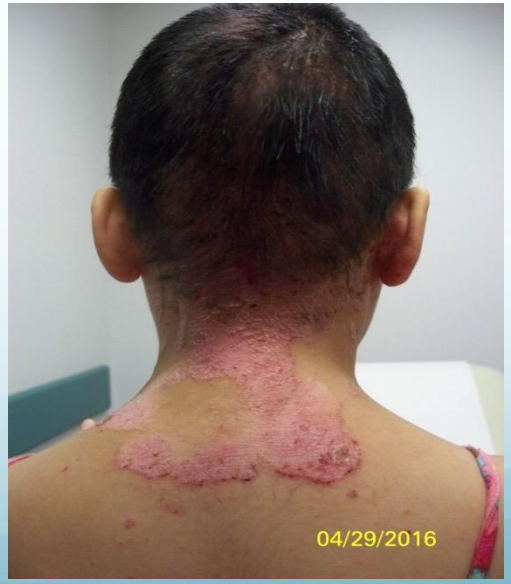


NOTES

Nummular Eczema
DD: Ringworm, Strep Infection






04/29/2016

NOTES

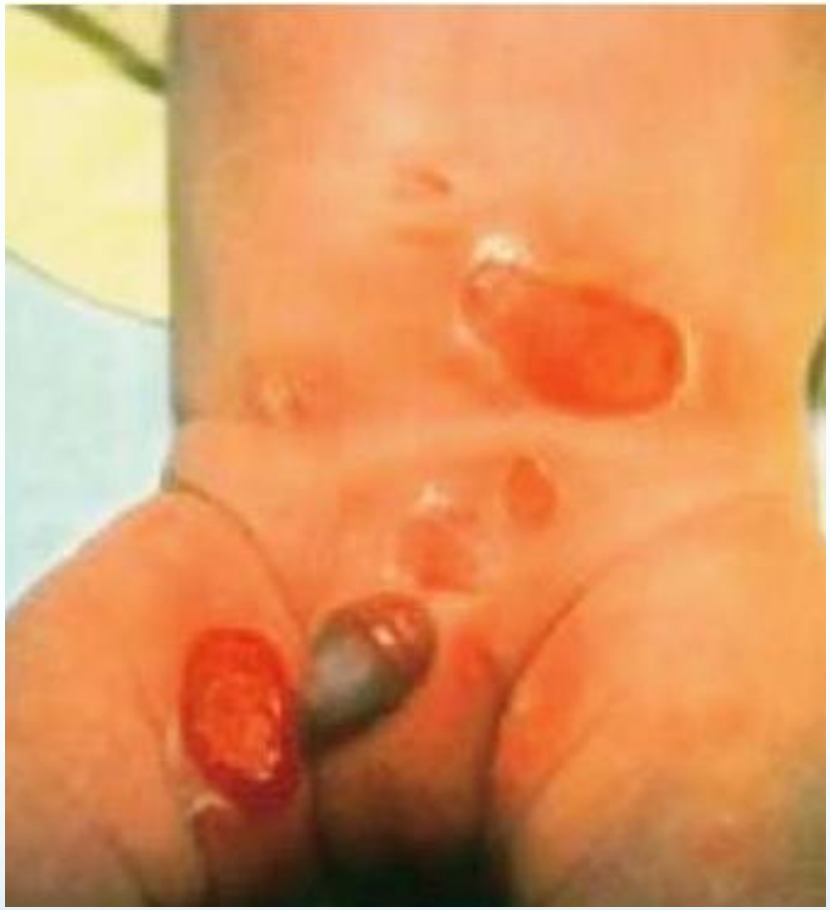
Super Infected Psoriasis. DD: Impetigo, Tinea Capitus, Contact Dermatitis, Allergic Drug Reaction

Hx: this poor girl was seen MANY times over the course of two years and was given “a special shampoo,” Many treatments tried--Neosporin, Septra (which she was then reported to be allergic to…based on the photos of the so-called reaction), hydrocortisone, mupirocin, griseofulvin, ketoconazole shampoo, prednisone, and Augmentin. Mother had tried soaking scabs off and using a paste made of nutmeg that reportedly helped reduce the drainage. She was losing clumps of hair and getting teased.

The first photo is the day she was sent in by RMT.
Admitted her to NW, did skin care with bleach and chlorhexadine sponge baths, oral clindamycin, oral fluconazole and topical mupirocin. She rapidly improved and was discharged on HD#4.

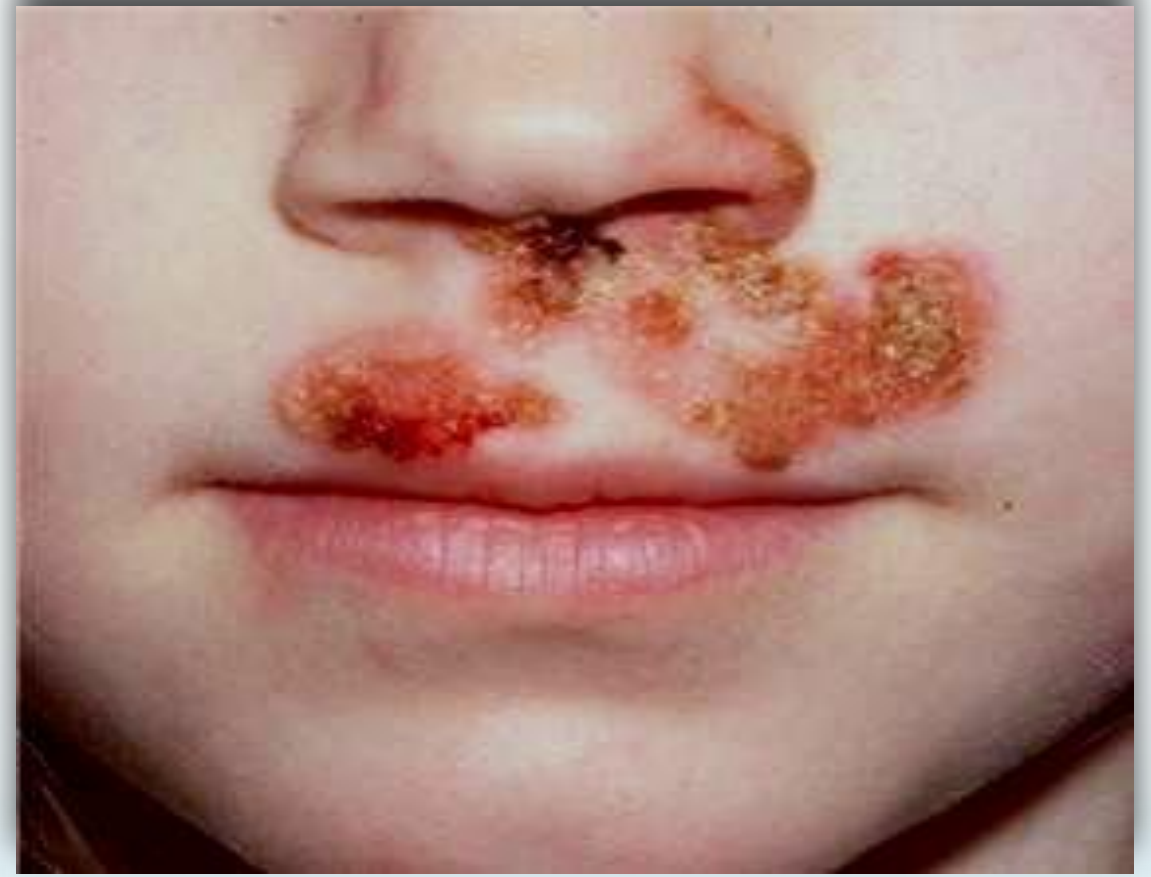
She returned for follow-up five days later looking much better. Photos attached. I referred her to Gina Brown for likely psoriasis management. Dr. Brown agreed with the diagnosis and now follows her for psoriasis.

The main learning point here was how many times she was seen and treated without good MRSA coverage. We had to calm the super infection down first, and then we could see the underlying process.



NOTES

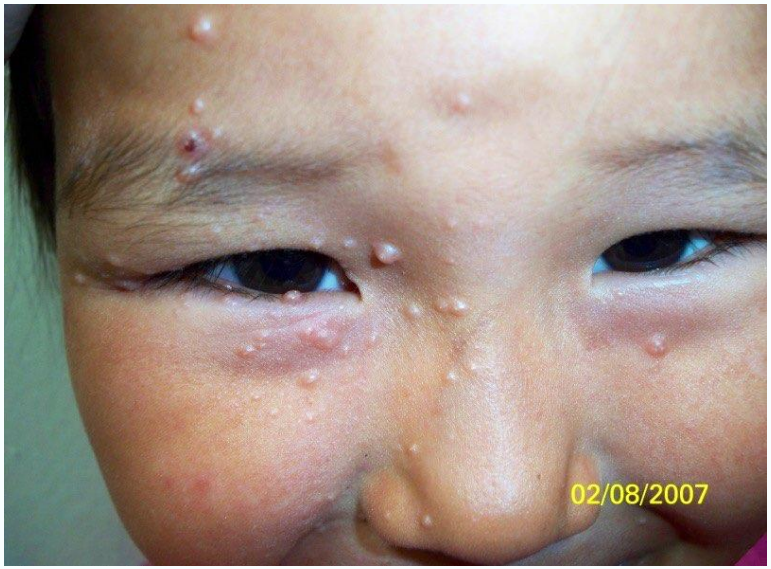
Staph Scalded skin.
Hospitalize and IV antibiotics



NOTES

Impetigo.

- Mupirocin on lesions and in nostrils
- Bleach Baths
- Septra if more extensive involvement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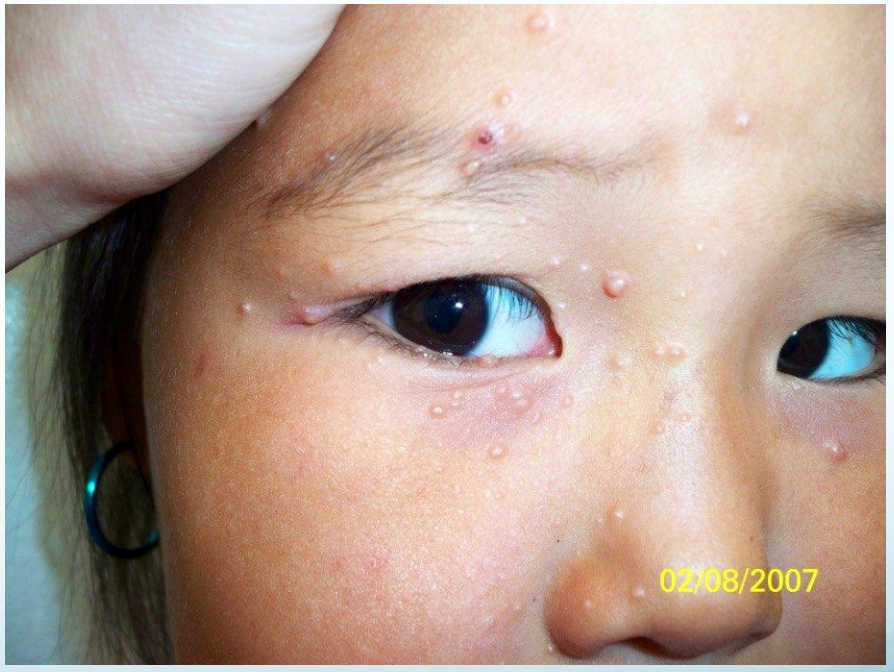
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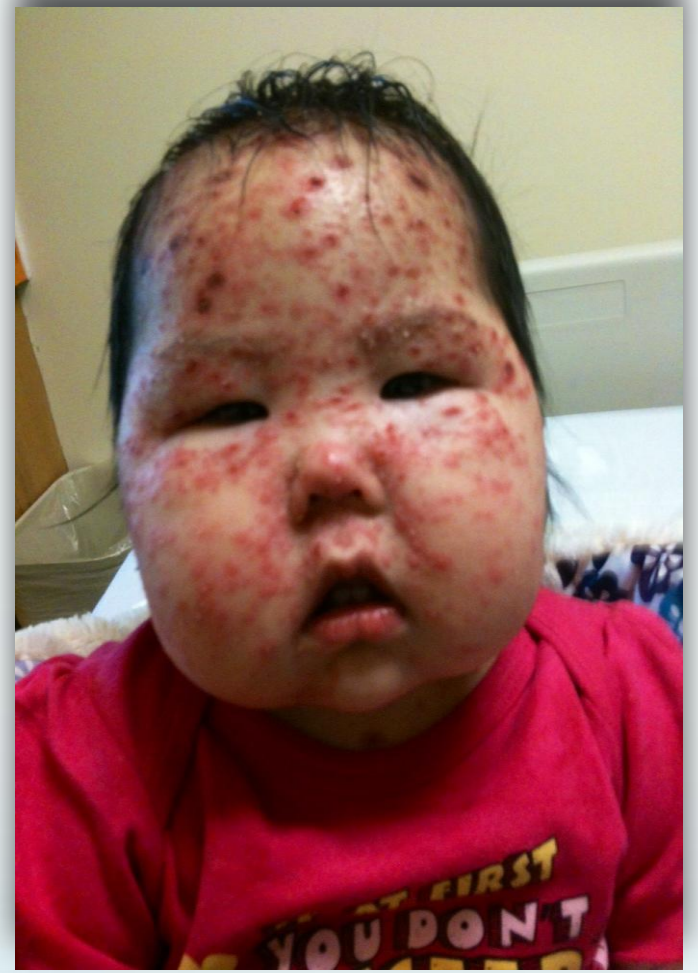
NOTES

Molluscum Contagiosum.

- No treatment.
- Goes away on its own.
- Can freeze, unroof, and treat with topical burning stuff but not recommended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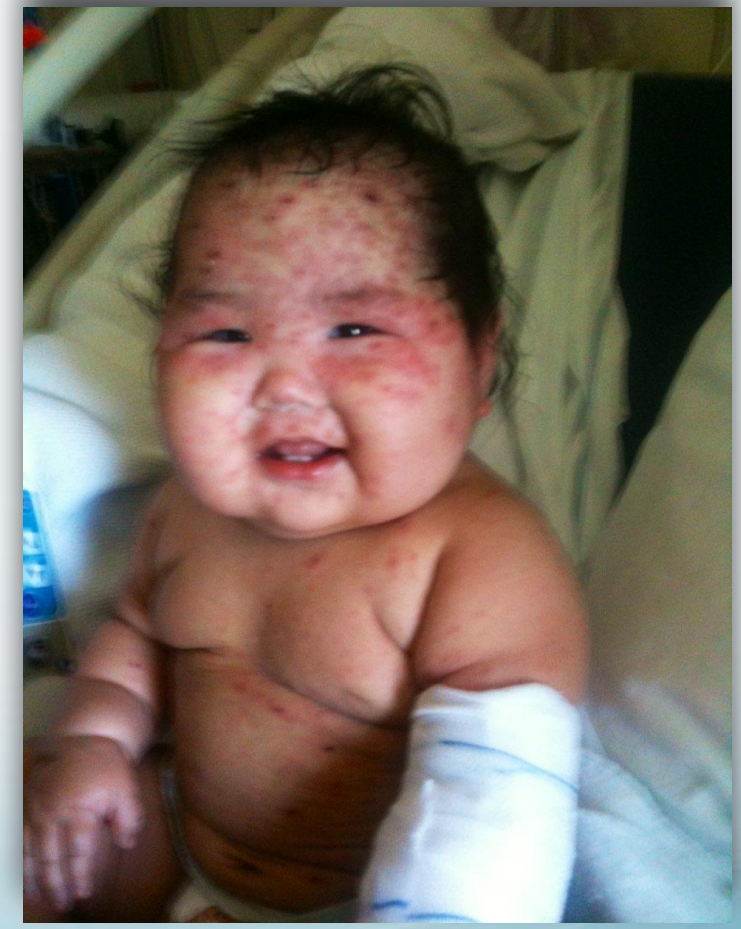
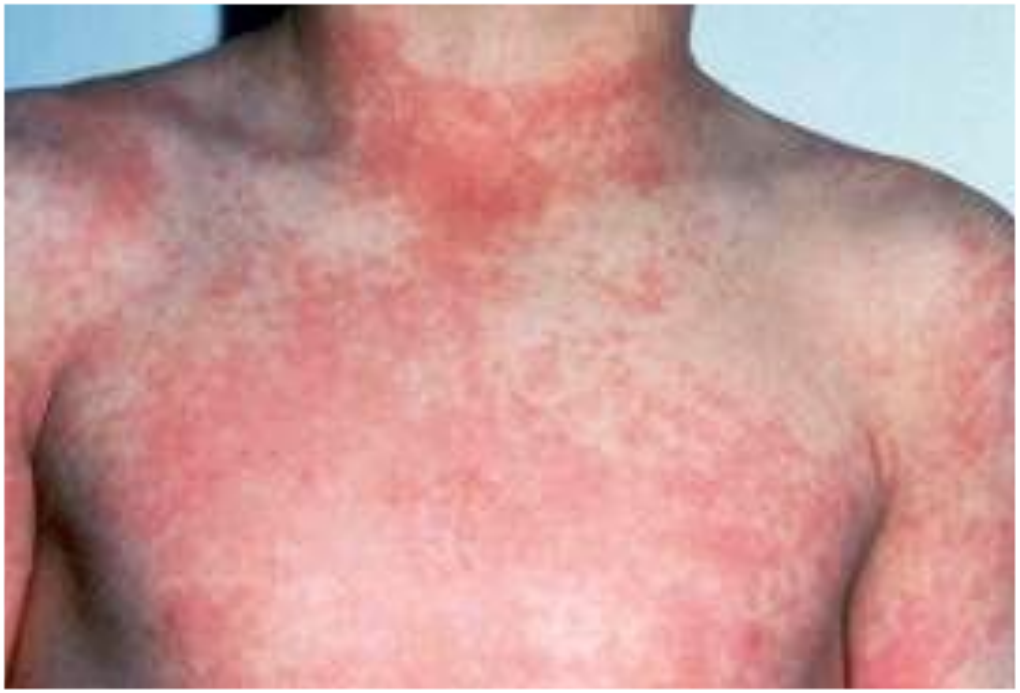


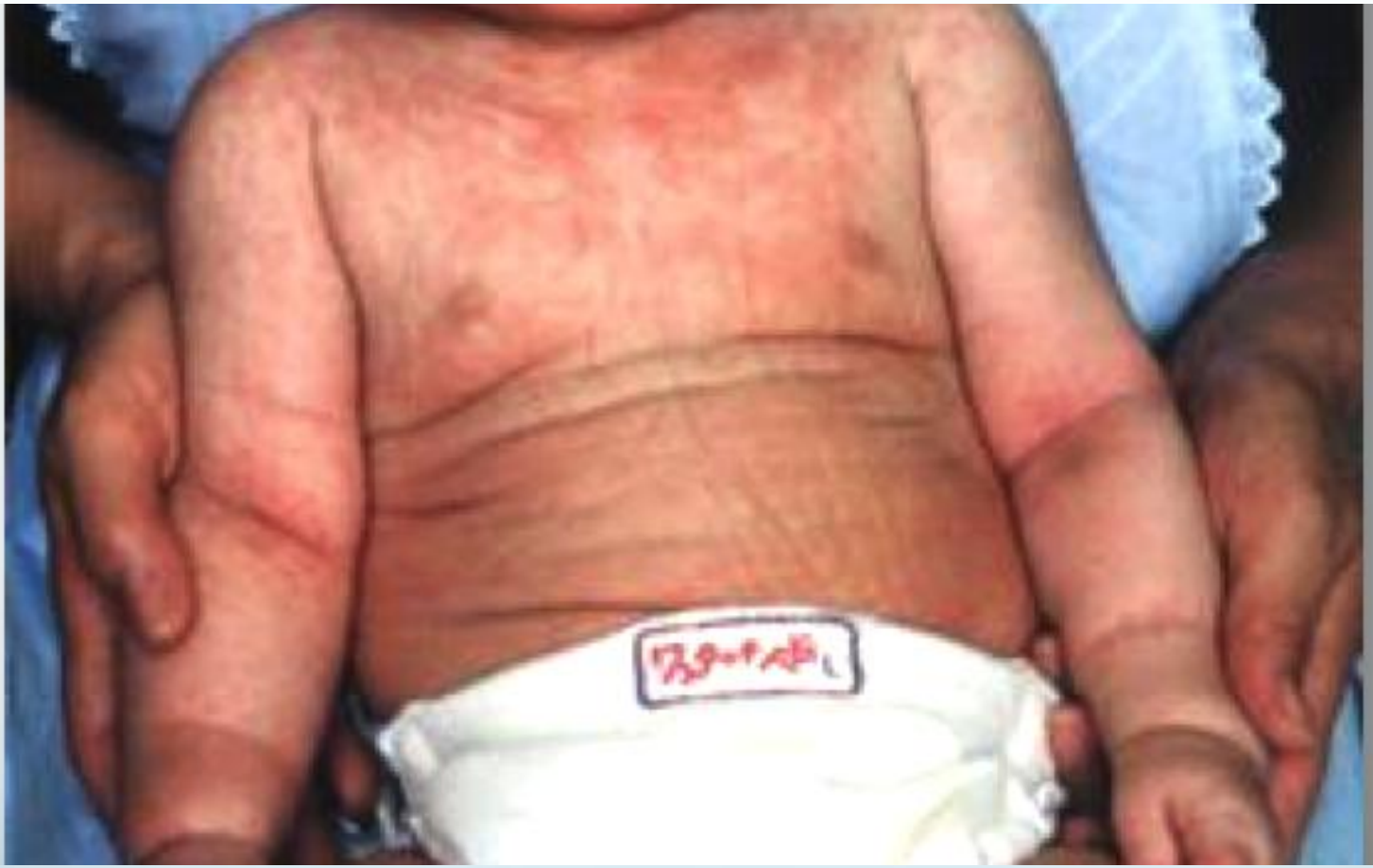
NOTES

Eczema Herpeticum
Admitted and given Acyclovir



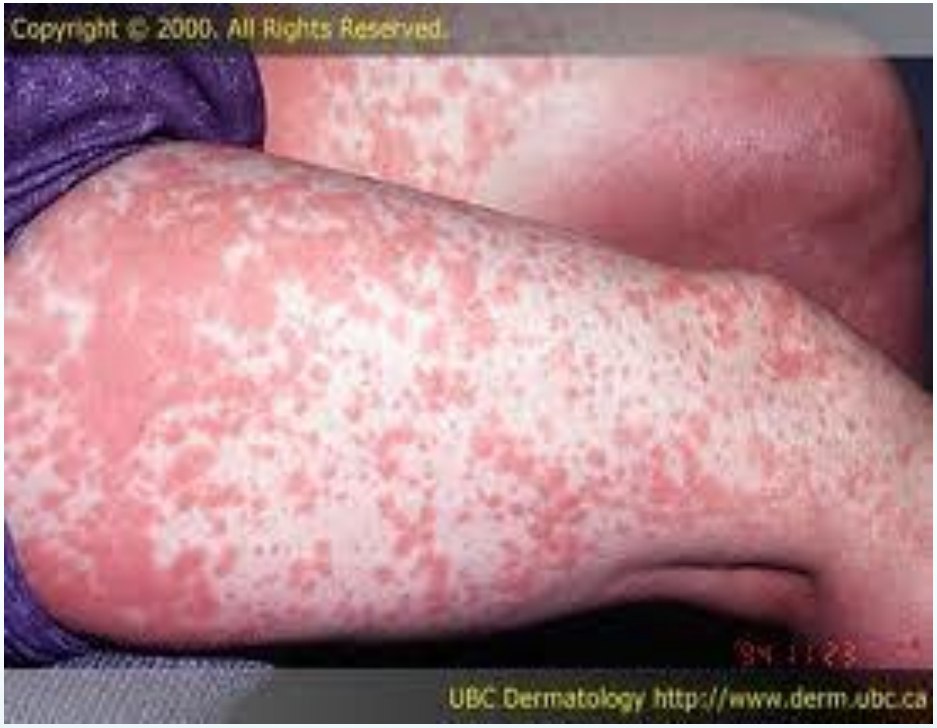
NOTES

Scarlitina.
Sandpaper rash
Post strep rash



NOTES

Roseola
High fever in infant followed by rash


Copyright © 2000. All Rights Reserved.
UBC Dermatology http://www.derm.ubc.ca

NOTES

Viral Rash.

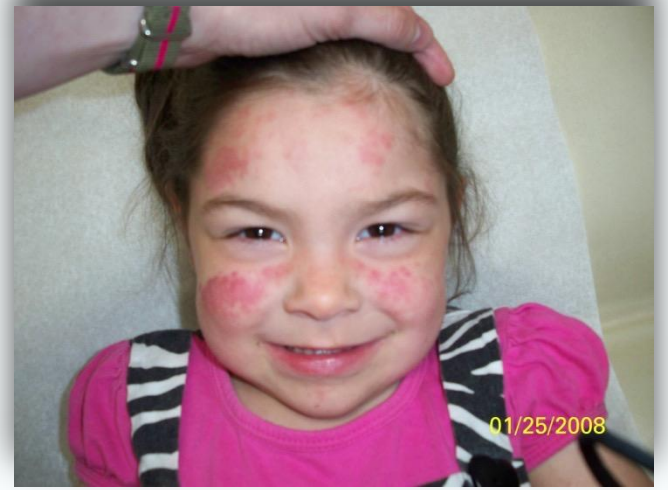
Who Cares?!!!

They all get better (unless you are immunocompromised)

Don’t overreact with the common rashes, but be watching out for the worrisome ones

Unusual Cool Stuff

And things to make you think!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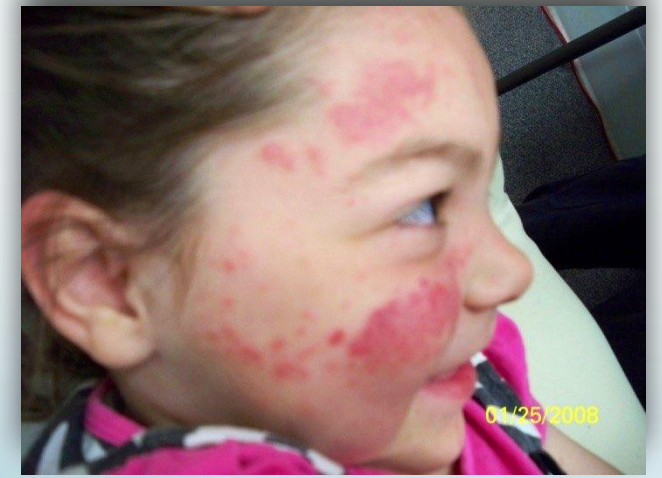
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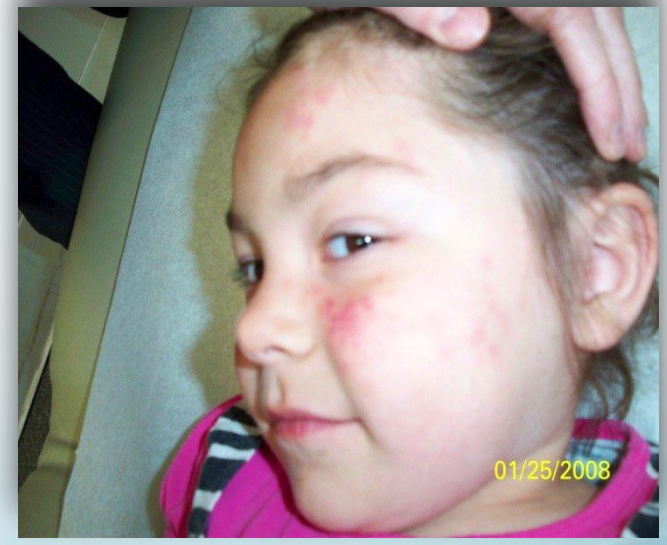
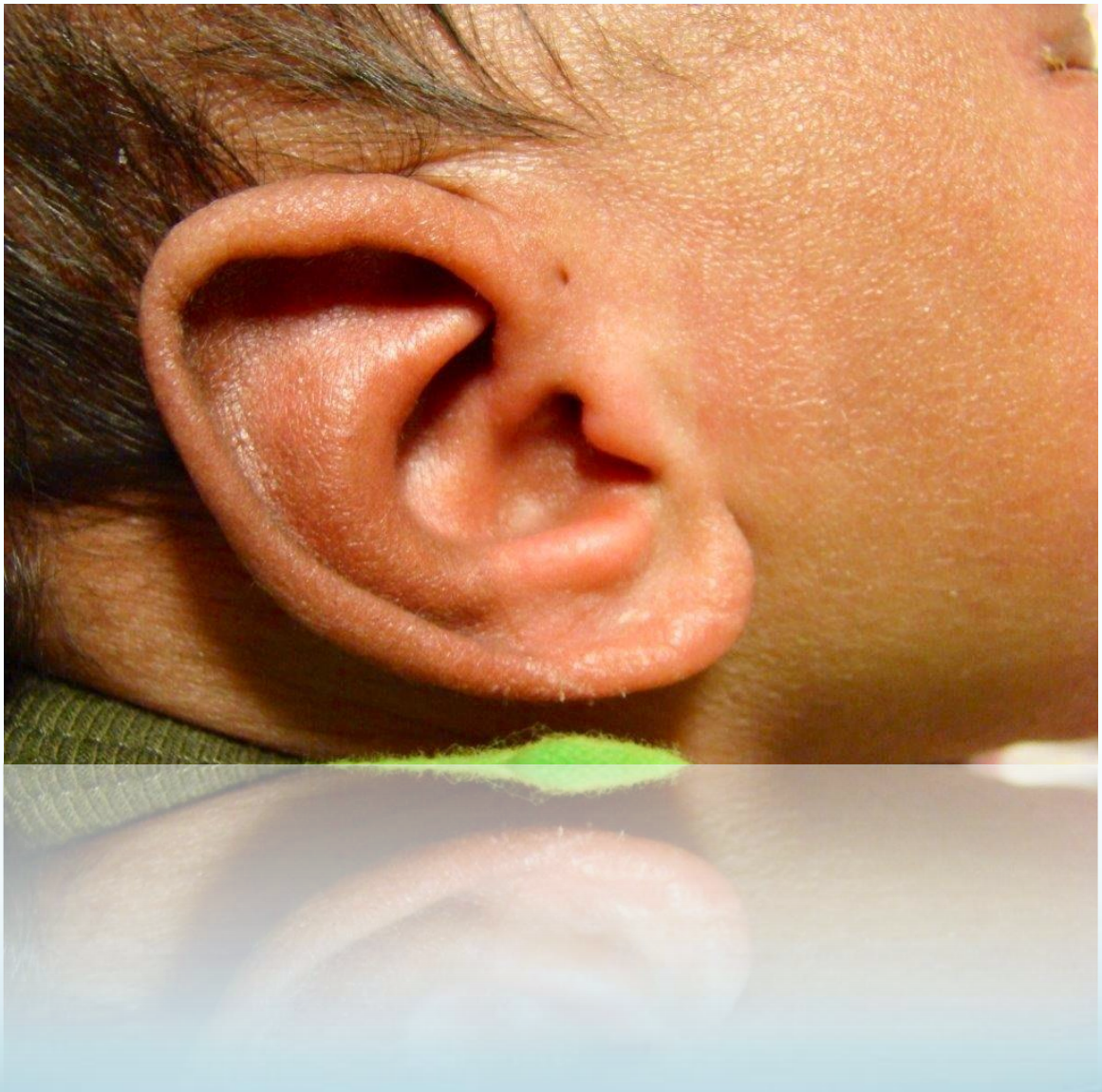

01/25/2008

NOTES

History: 4 year old girl with no significant PMH presented with a facial rash and hand burns. Her mother reports she was playing in the sun without sunscreen at her grandfather's home 2-3 days previously and began to have a pale pink rash on her cheeks. The rash spread and deepened in color and became dark red-purple. It does not itch. Her mother reports she has always been very protective of Madeline and has always used a lot of sunscreen and had her covered up or in the shade; it is very unusual that she was out in the sun without sunscreen the other day. Over the past few days, she has gotten more tired than usual when playing - she will be energetic and run around outside and then come in and fall fast asleep - unusual for her. No new exposures. No tetracyclines ever.

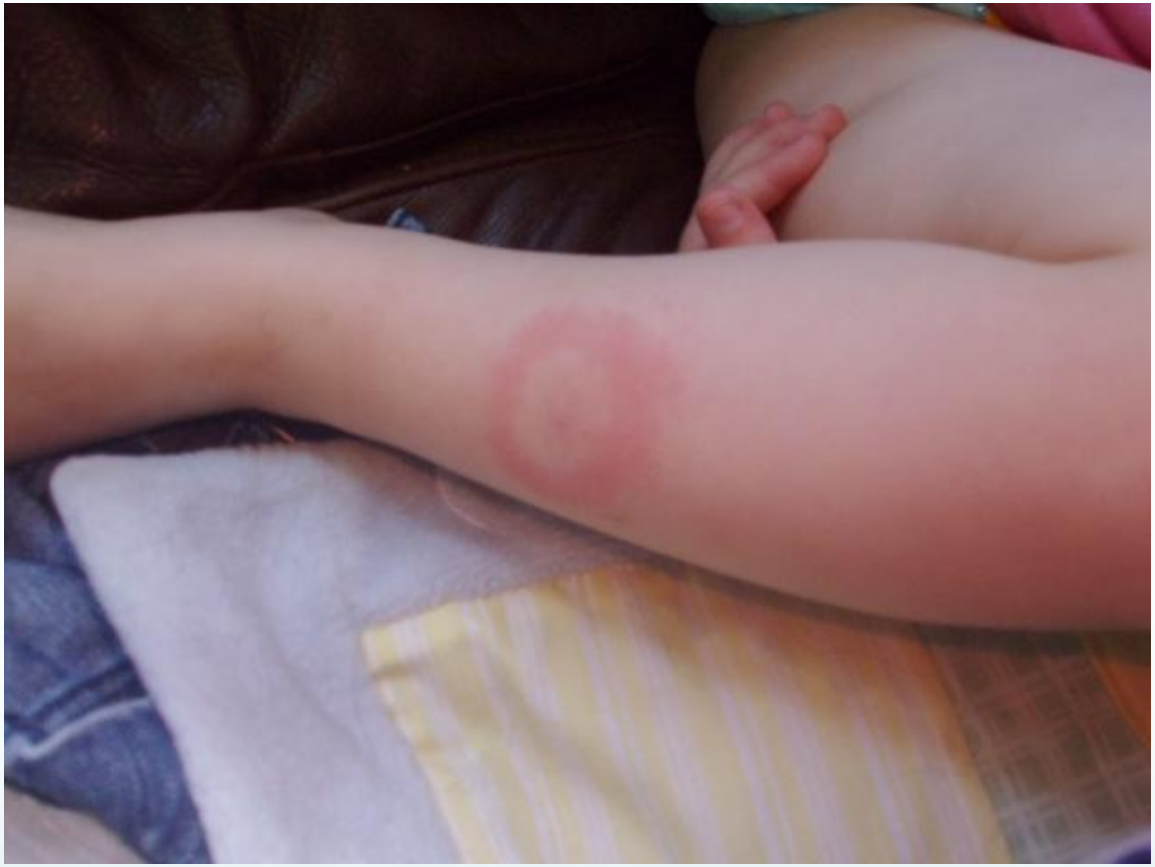
Polymorphic Light Eruption



NOTES

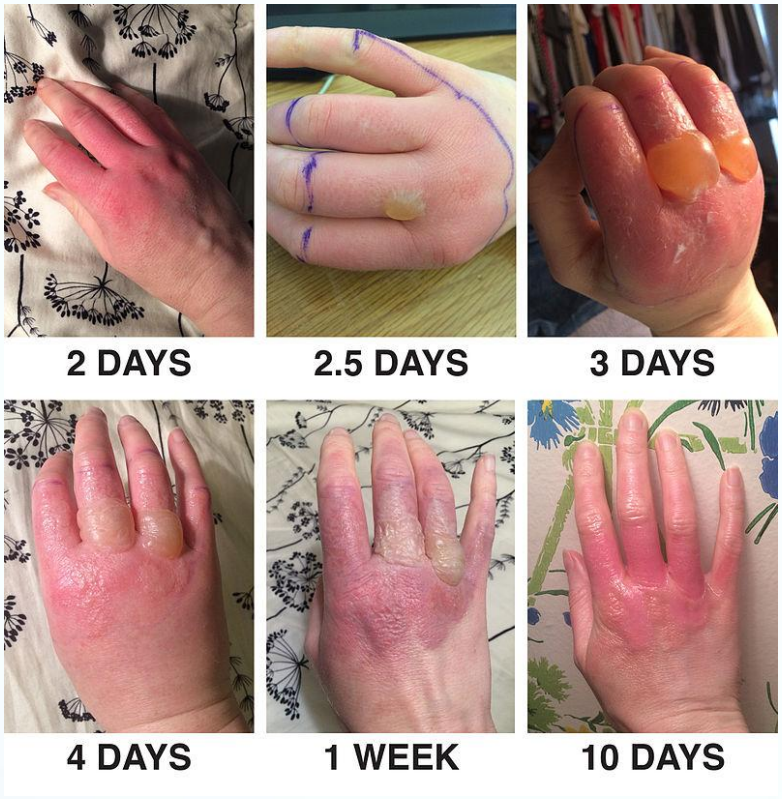
Pre Auricular Pit.

- Associated with hearing loss and renal anomalies
- Renal anomalies only slightly greater risk than general population therefore not significant enough to warrant RUS or further w/u unless there is a problem identified



NOTES

- 2 yo. Dad noticed rash on leg when getting off plane in Bethel.
- Had been in Tennessee 7-10 days prior.
- No known tick exposure.
- Mother (Alyssa Perry PAC) and myself diagnosed it as Lymes disease and started Amoxicillin.
- Did not send titers as it was a classic rash with travel to an endemic area. Also did not want to wait for results before starting treatment.
- At nine years of age the patient was evaluated for another long lasting rash and convalescent titers for Lymes disease were positive ☺

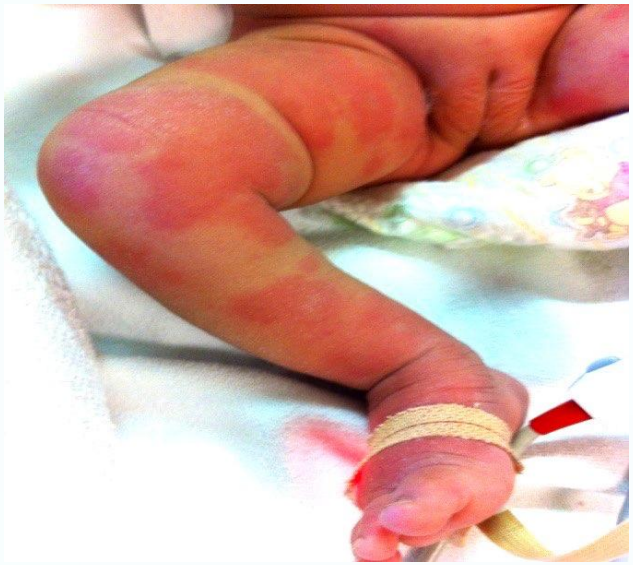

2 DAYS
2.5 DAYS
3 DAYS
4 DAYS
1 WEEK
10 DAYS

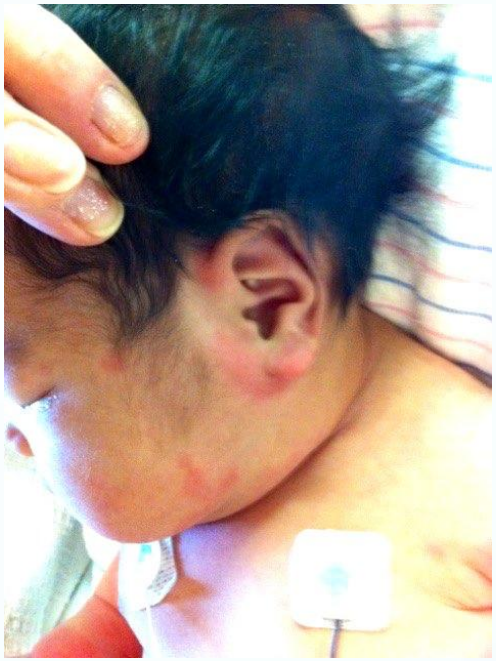
NOTES

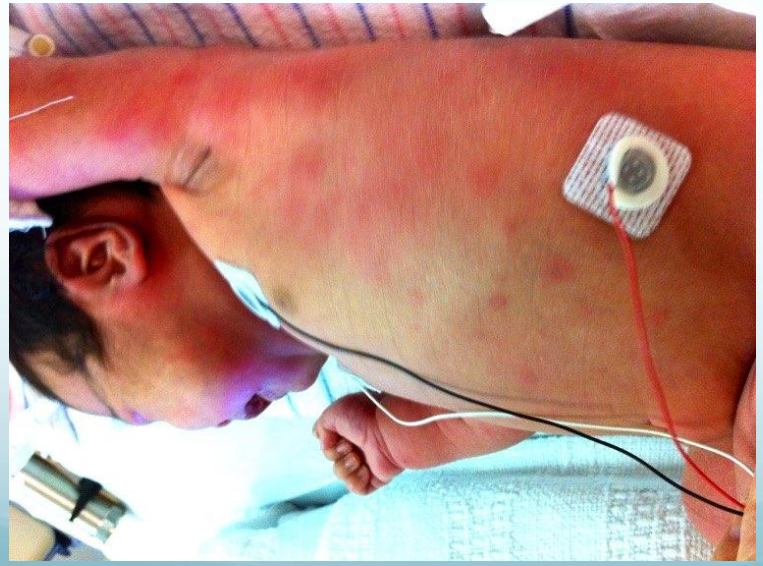
DD: Poison Oak, Burn, Contact Dermatitis

Phytophotodermatitis.
Caused by contact with the photosensitizing compounds found naturally in some plants and vegetables like parsnips (cow parsnip), citrus fruits (lime…Limes Disease lol) and more.

This one is for you Liz!







NOTES

Hospital Day 1: HPI 3wo with new onset rapidly progressive rash x1 day. Sent to ER the day before admission. Complete septic w/u with LP negative. Baby acting well and admitted on no antibiotics. ASO, HSV, PCR pending. No LFT's done. No sick contacts, no exposure to contacts with rash, no meds, stopped BFing 1 week prior and started Similac. No new lotions, detergents or diapers. Acting well otherwise with no fever or other symptoms except a slight cough.

Prenatal History: Mom B-, all prenatal labs ok except rubella non immune. Mom healthy during pregnancy and since.

FH: Mom with VSD repair as a child. No autoimmune or arthritis or Lupus

PE: AF VSS BP ok
Irregular slightly serpigenous rash moves around and changes. Red, warm slightly raised and blanches. Couple of the raised area have a bit of a dusky center. Hands and feet slightly swollen and warm. I-II/VI PPS type murmur with good pulses. -HSM. Dry appearing lips. Mucous membranes normal. No

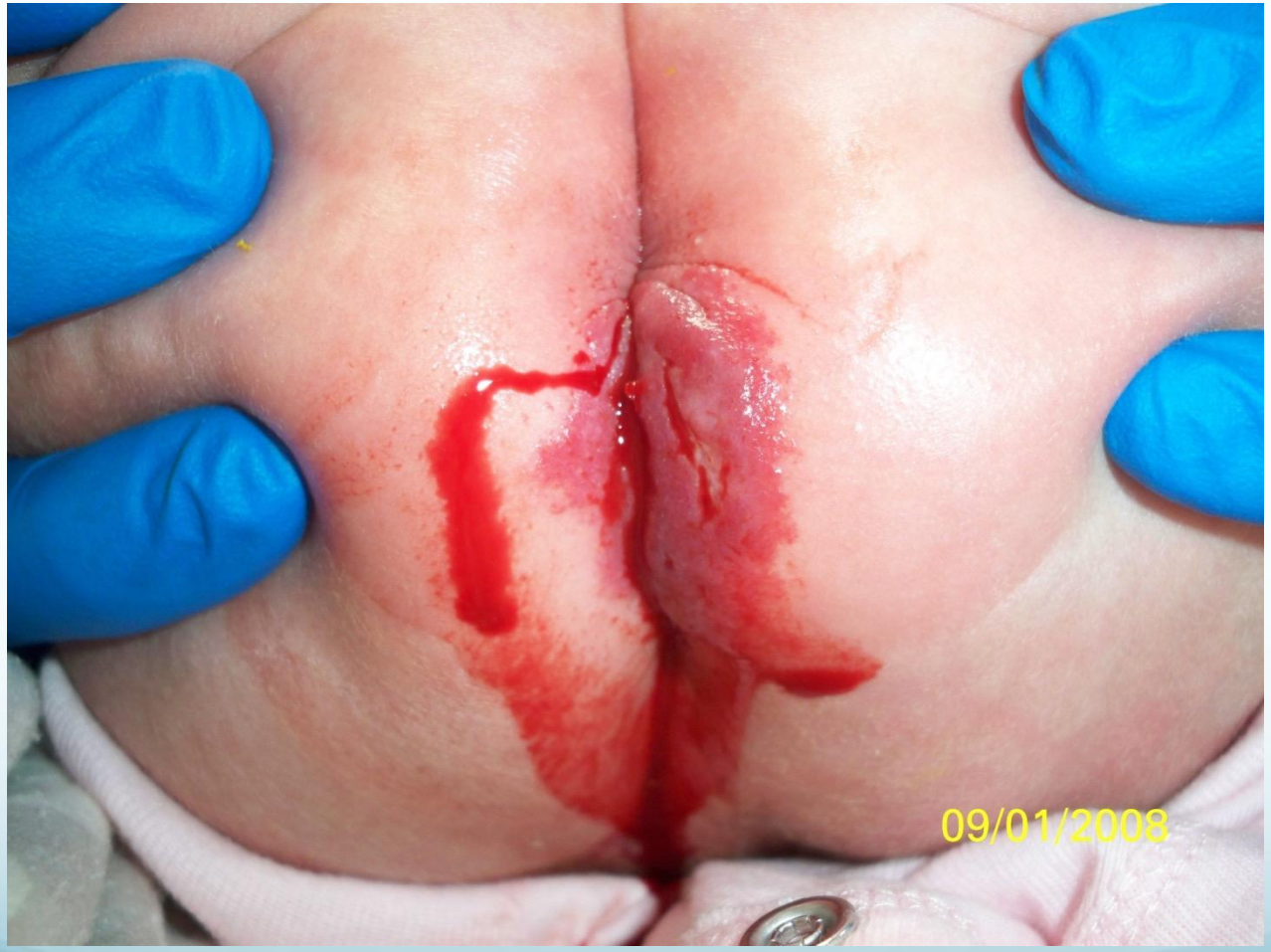
Hospital Day 2: Rash decreased and faded with no treatment.
Consulted Mary Alice Johnson, NICU attending, who agrees with most likely diagnoses of Annular Erythema of Infancy. She suggests mom consider getting a Lupus antibody test just to be sure.

Neonatal derm text and google research indicate rash moves around gets larger and clears centrally. It is probably an antigen sensitivity reaction of unknown etiology. Generally asymptomatic and clears in a few days, but reoccurs every few weeks for up to the 1st year of life (rarely longer). DD Lupis, EM, Urticaria, Erythema Chronicum Migrans, neonatal Lyme's Disease.

Hospital Day 3: Rash Resolved! *(10/10/2011 9:18:41 AM)*

Annular Erythema of Infancy

Mom gave permission to share pictures for diagnoses and teaching *(10/8/2011 12:44:55 PM)*

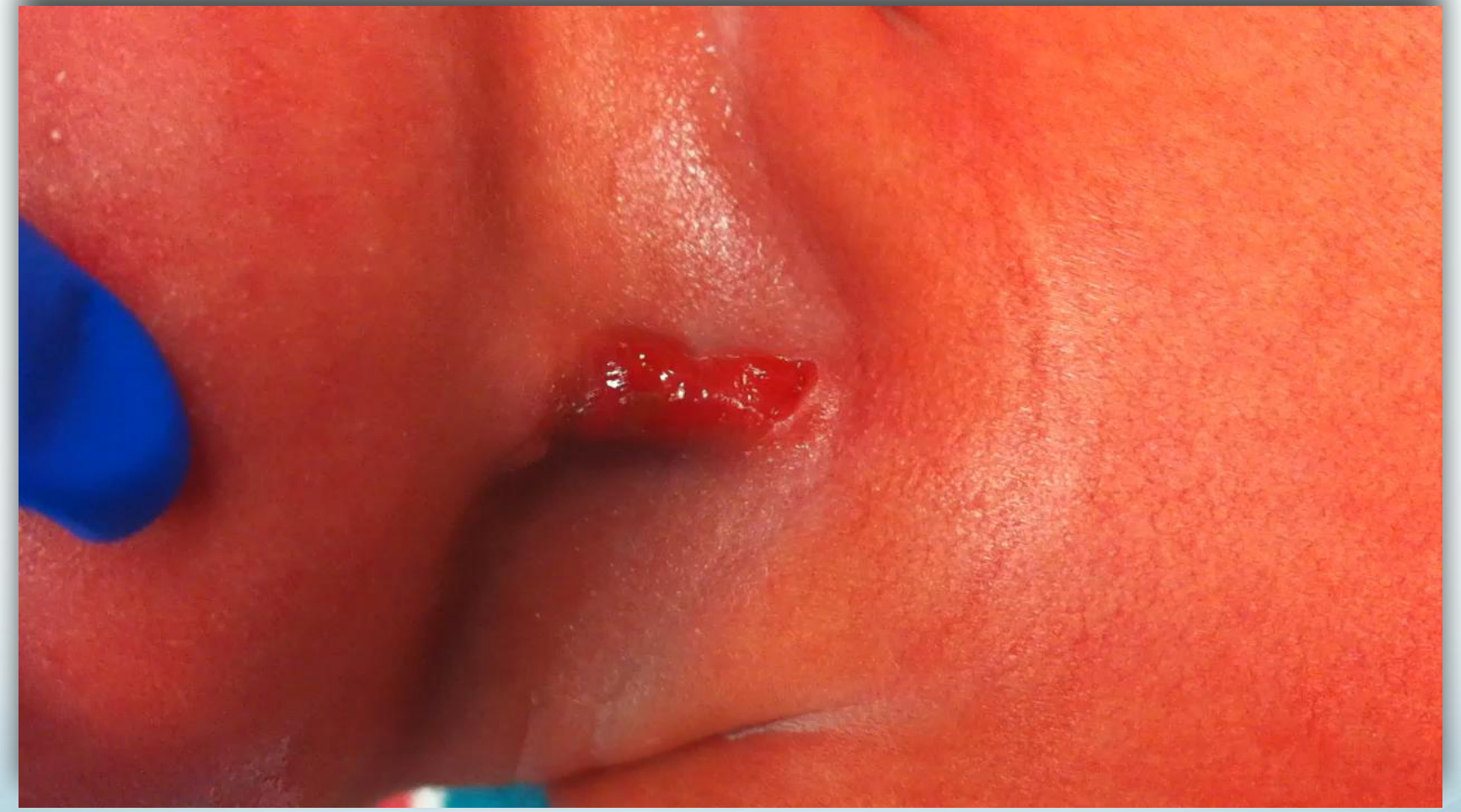

09/01/2008

NOTES

Perianal Hemangioma

Hx: 7 week old girl with perianal hemangioma that was getting more raised and bled with stooling. When Leslie Herrmann went to take photos, there was stool on it, so she cleaned the stool, and it bled like STINK! She thought the mother was going to throw something at her.

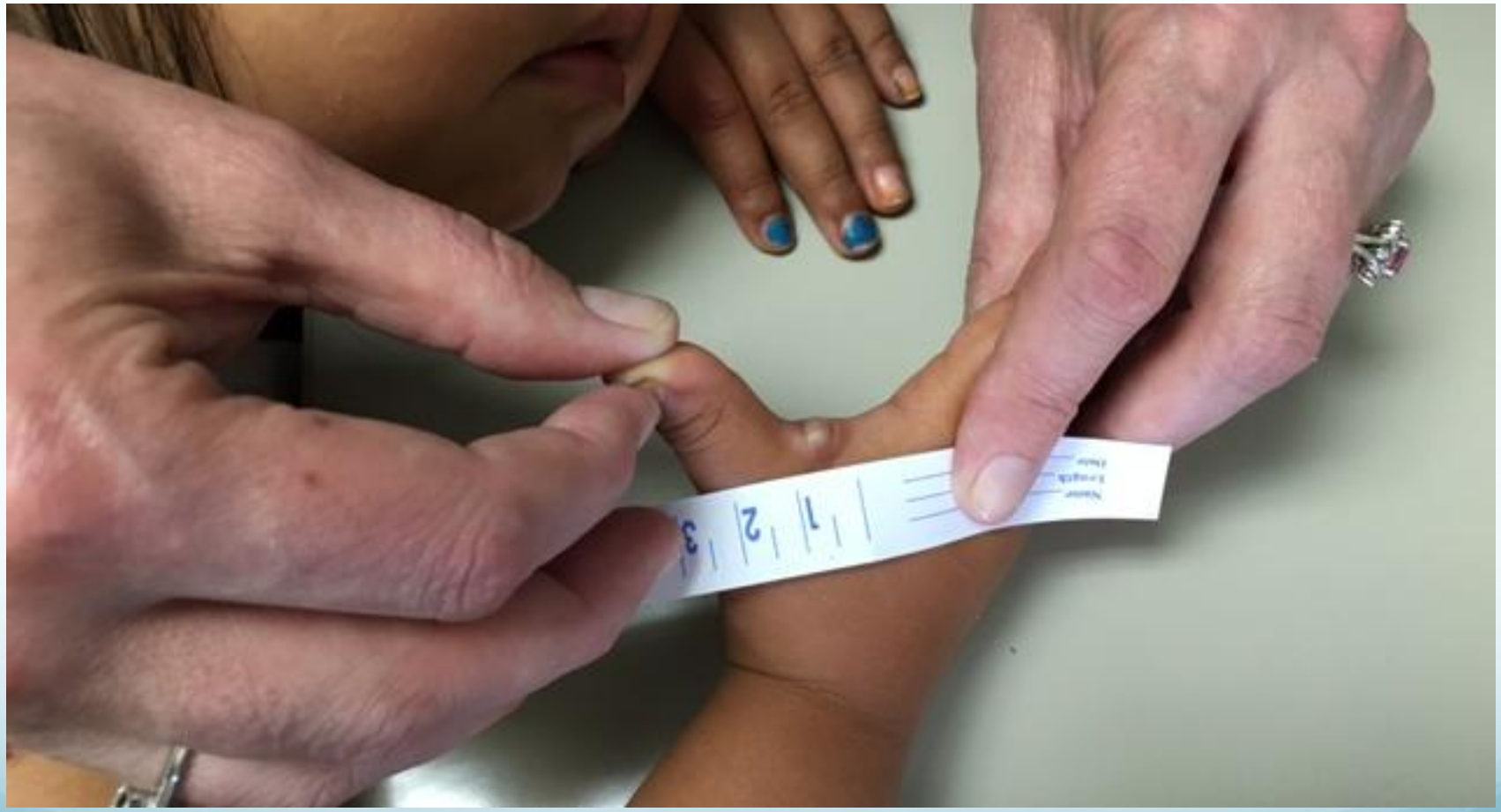
Gina Brown recommended topical lidocaine (which she did) and topical metronidazole (which we did not do). She is now 21 months old. We haven't seen her here in >> a year, and it seems she still hasn't gone to Dr. Brown. Unclear if the hemangioma is still there



NOTES

Thyroglossal Duct Cyst

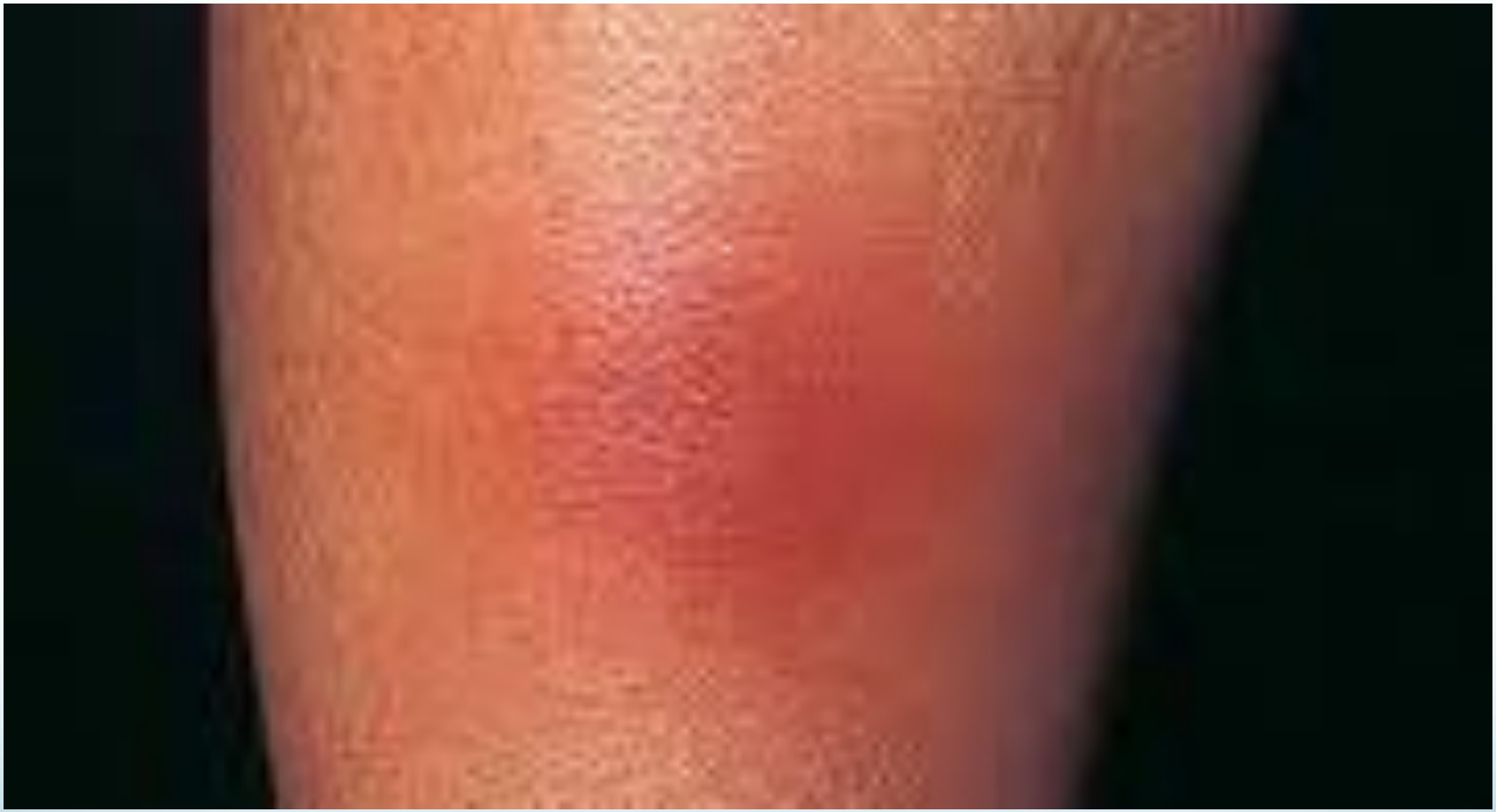
?



NOTES

•Splinter several weeks ago.
•Swelling with some redness and then firm white center.
•Now smaller.
•Doesn’t bother her

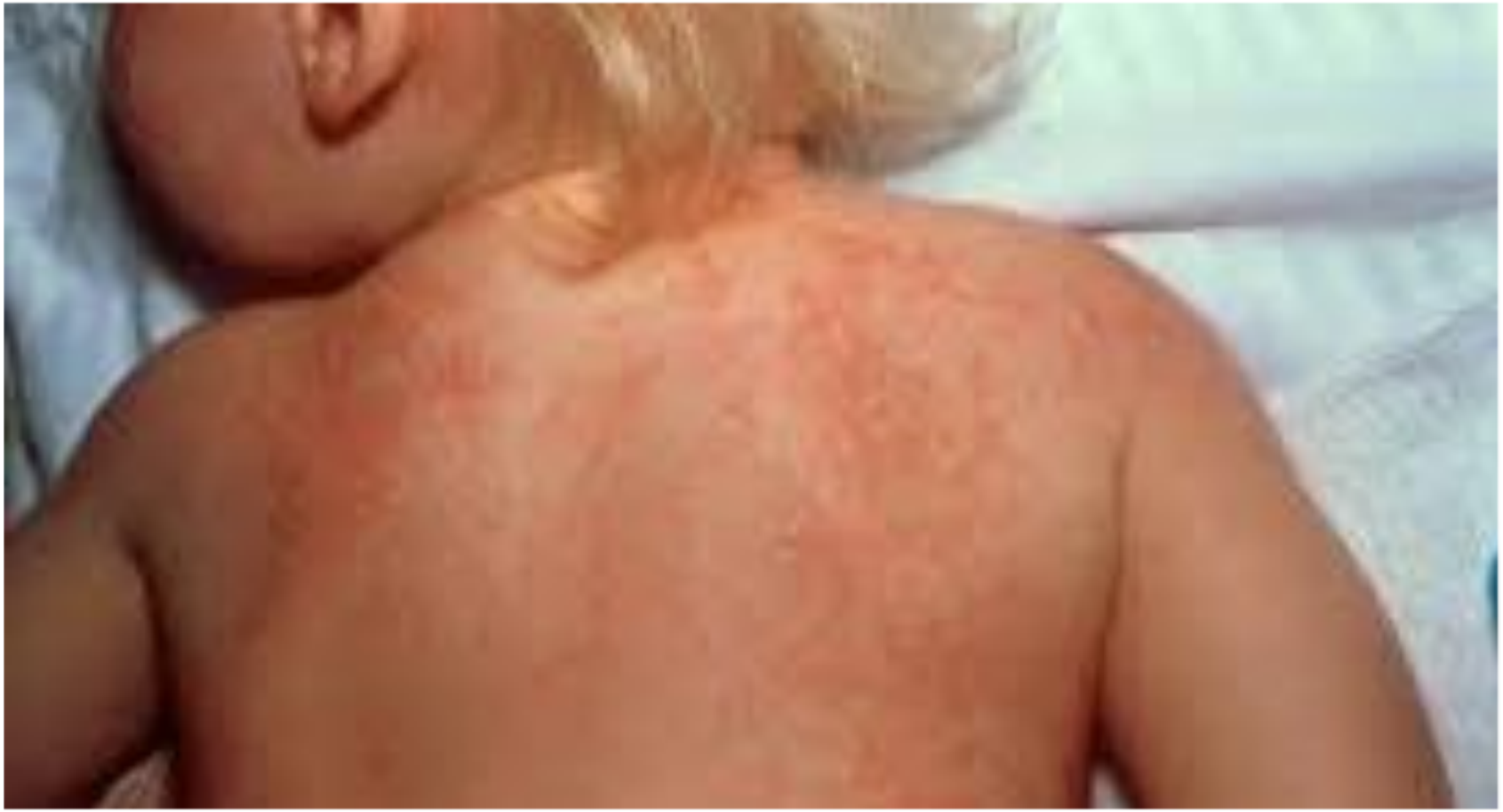
•DD???!!!



NOTES

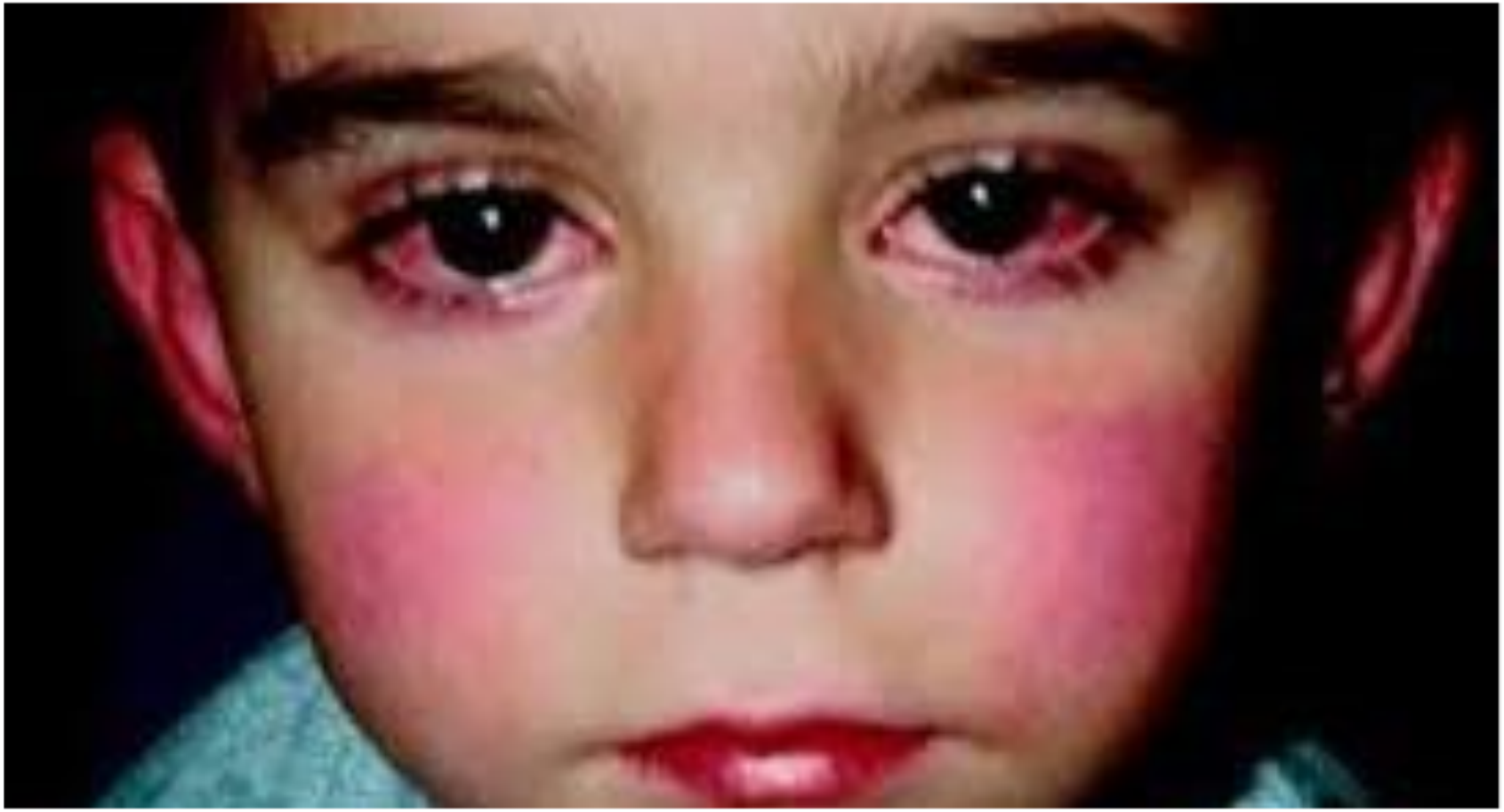
Erythema Nodosum

- Fatty Inflammation
- Post Step, TB and Coccidiomycosis.
- 50% unknown!
- Watch out…It can look like a boil



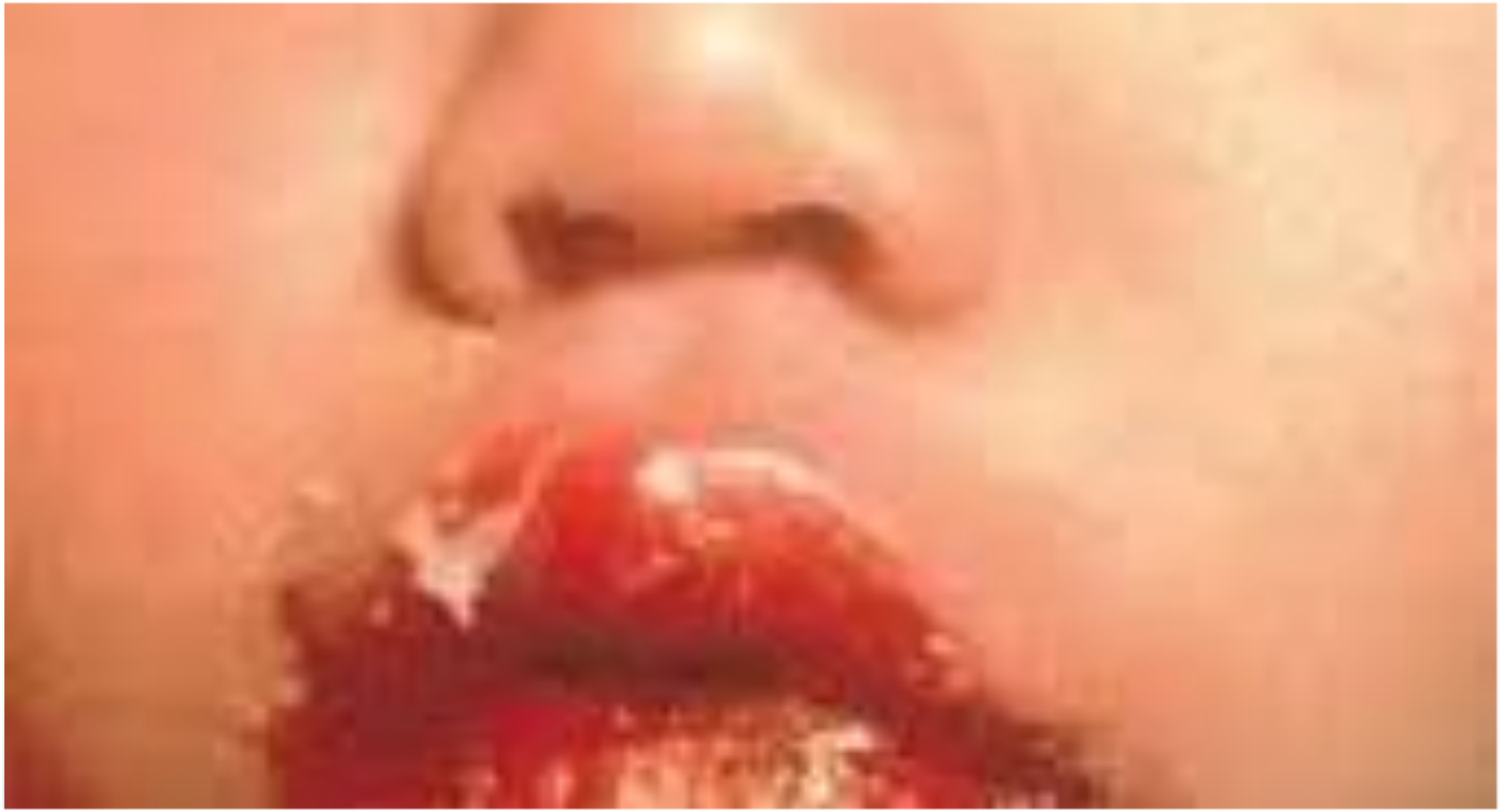
NOTES

Viral appearing rash



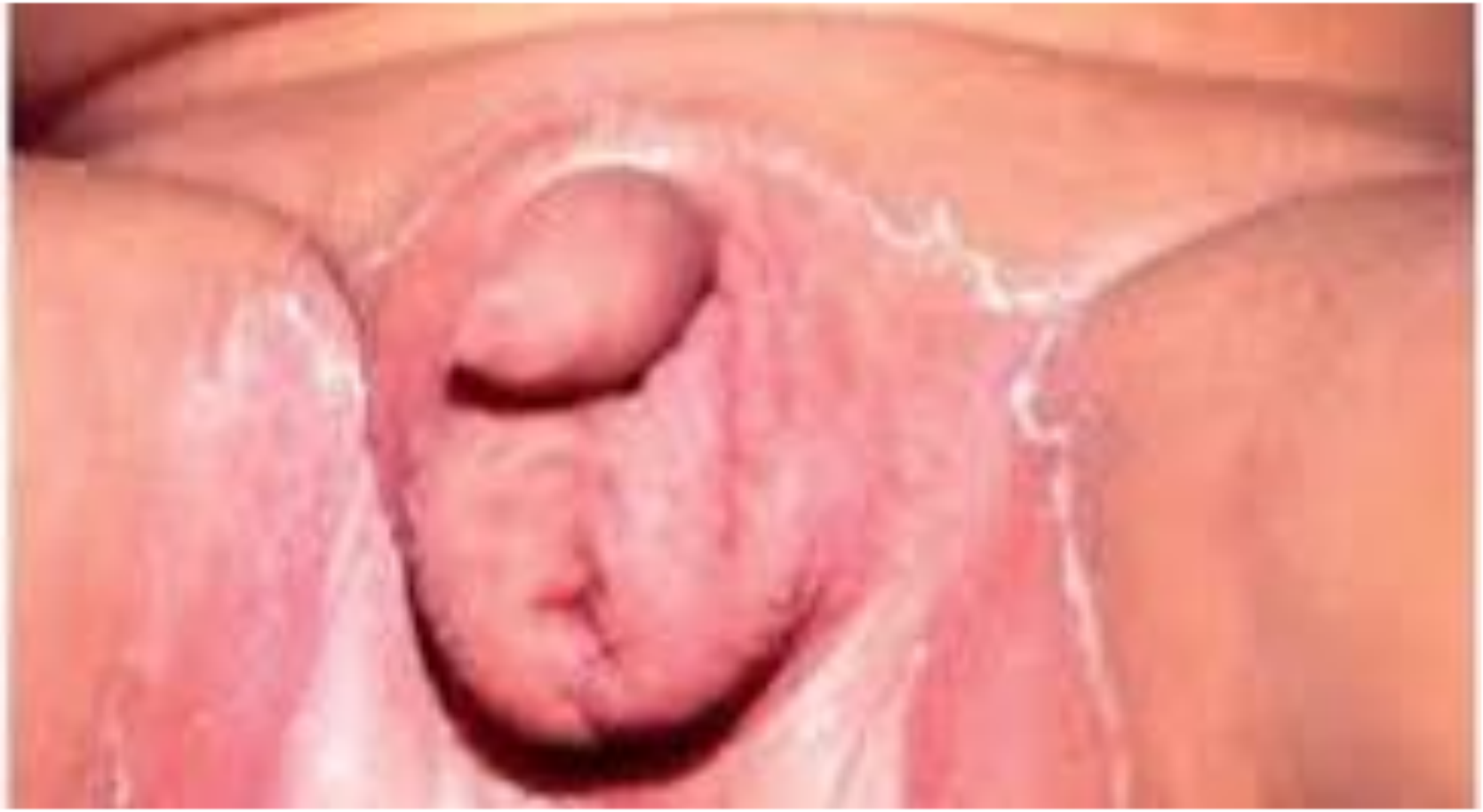
NOTES

Painless, non pruritic, conjunctivitis without discharge



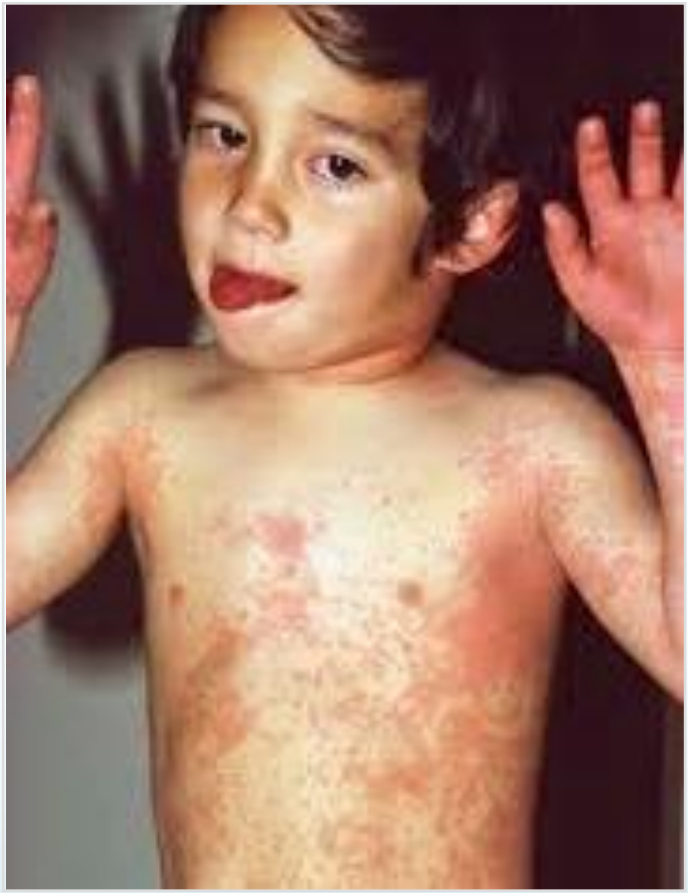
NOTES

Mucous membrane involvement



NOTES

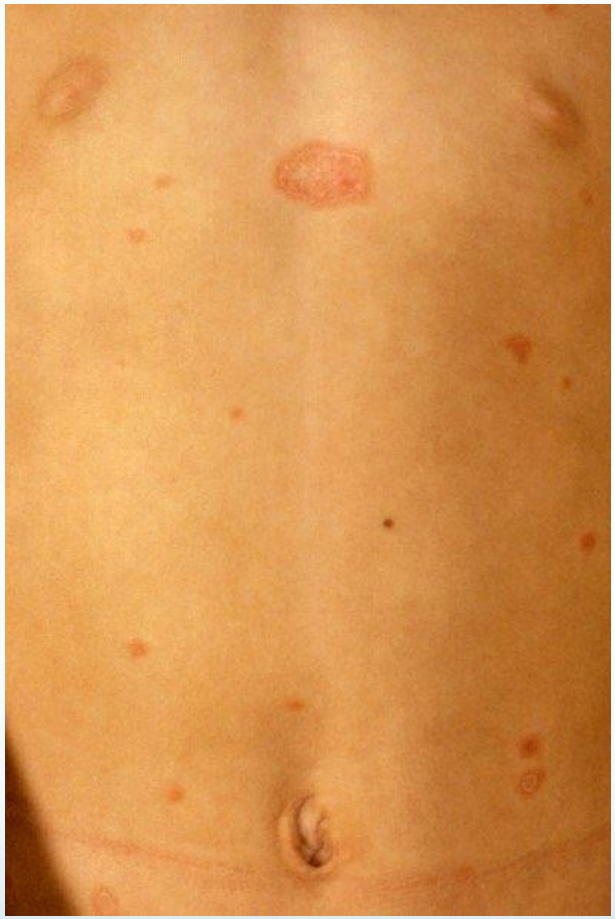
Mucous membrane involvement



NOTES

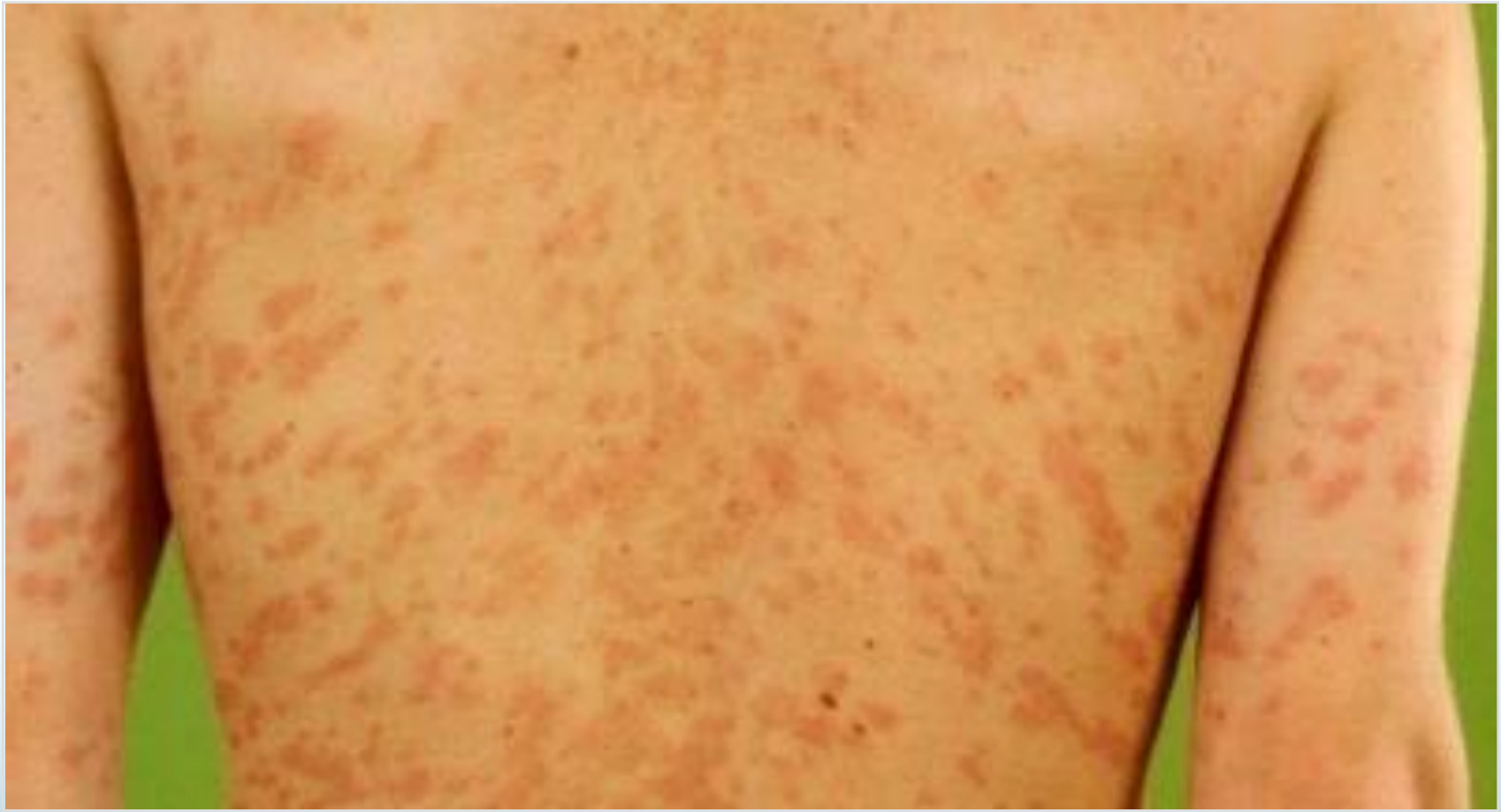
Rash,
Fever,
Mucous Membrane involvement,
LN involvement,
intense irritability

Kawasaki.



NOTES

DD= Ringworm, impetigo and ??



NOTES

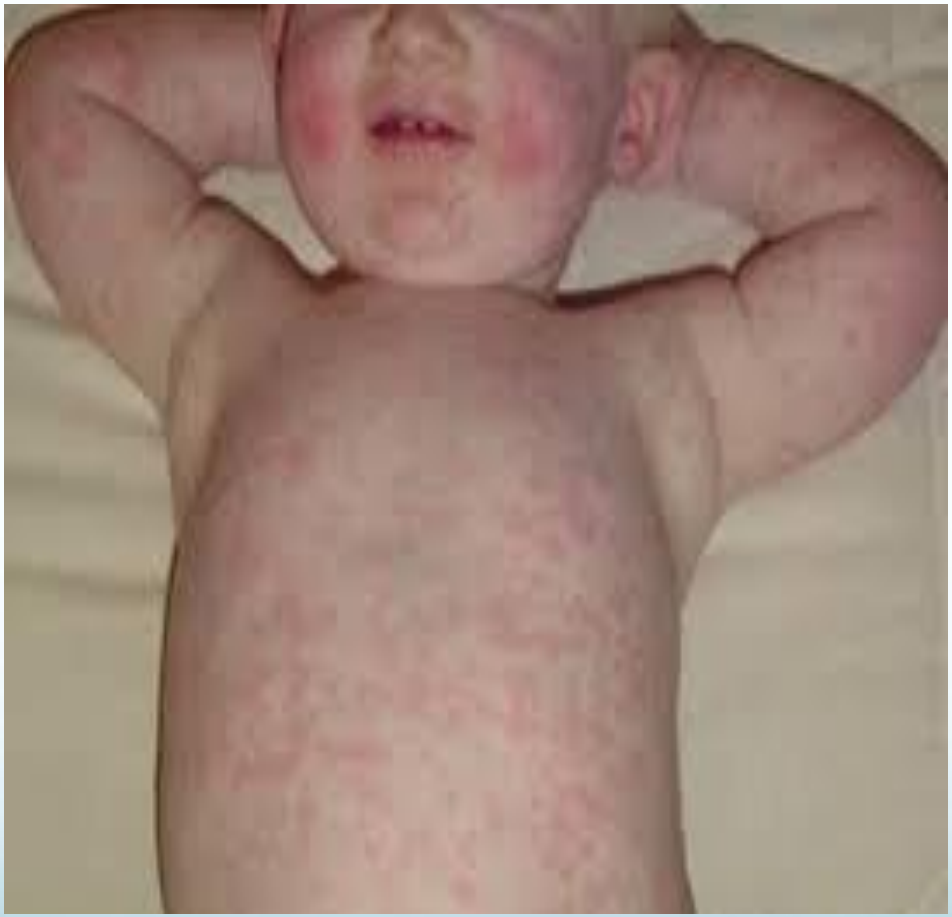
DD: viral rash, fungal infection

Proceeded by *Herald Patch* (from previous slide) which is usually on the trunk and may have been missed.

Then develop Christmas tree rash on back. Ovoid pink scaly maculopapular rash on back following the lines of pastilla.

Pityriasis Rosea.

Viral Rashes



NOTES

- Lots of them
- Hard to diagnose
- Get better on their own
- Think Horses, but don’t miss Zebras
- Rule out worst case scenarios and reassure care takers
- It is probably not chicken pox
- Don't diagnose an amoxicillin (or other drug) allergy without a good history for true allergy, pictures and get a second opinion and/or third opinion!

AMOXICILLIN RASHES ☹

- The most common reactions to penicillin are delayed cutaneous eruptions-most likely mediated by T cells in the skin.
- Delayed cutaneous eruptions are usually maculopapular or morbilliform and often associated with a viral infection
- These rashes are more prevalent in children (usually under 12 months)
- Please do not diagnose amoxicillin allergy with infant rashes without a seeing the rash and getting a scary, bad allergy history…see my 'Stamping Out Amoxicillin Allergy' powerpoint in wiki>patient care references>presentations
- Almost 100% of these rashes are viral… with a possible reaction with amoxicillin.
- Reassure the family and providers, give them an amoxicillin rash handout (patient education>amoxicillin rash>all) and assure everyone that the patient can have amoxicillin again in the future with out a problem.

Amoxicillin Rash Handout In RAVEN Patient Education (minus the pictures)

What is an antibiotic rash?
An Amoxicillin or Augmentin rash is a non-allergic rash that can occur when a child is taking one of these medicines. The rash usually appears on the 5th day after the child starts taking the medicine, but may appear earlier than or as late as the 16th day.
Symptoms of the rash include:
pink or red spots
small, flat, non itchy spots
always on the main body (trunk)
may spread to the face, arms and legs.
What is the cause?
5% to 10% of children taking Amoxicillin or Augmentin get a skin rash. This is a harmless rash and does not mean that your child has an allergy to Amoxicillin or other Penicillin drugs. An allergic reaction would cause hives or more severe symptoms than a rash. Often it is caused by a viral infection such as Roseola.

Viral Rash Picture-here **Hives Picture-Here**

How long does it last?
The rash usually lasts 3 days, with a range of 1 to 6 days.
How is it treated?
No treatment is necessary. Keep your child on the Amoxicillin or Augmentin until the medicine is gone. The rash will disappear just as quickly whether or not your child continues the medication. Your child can take Amoxicillin or Augmentin in the future when necessary. **When should I call my child's healthcare provider?**
The rash changes to hives.
The rash becomes itchy.
The rash becomes worse or lasts more than 6 days.
You have other concerns or questions
Your child is more ill appearing.

Patients With Amoxicillin Allergy Alerts

- Most infants do and did not have an amoxicillin allergy
- BUT it takes time to look for pictures and documentation of the rash associated with the allergy flag.
- If there is not evidence of true hives, mouth swelling or difficulty breathing-PLEASE do talk family into an Amoxicillin trial (see next slide)
- If there is a true allergic type reaction, then get allergy testing at age five.
- Amoxicillin and Augmentin are our best meds for many things…please help stamp out Amoxicillin allergies and remove allergy banners ☺

Amoxicillin Trial

ASSESSMENT:
Patient does not have any evidence of a true allergy to amoxicillin.

PLAN:
Recommend starting Amoxicillin per orders by weight today.
The first dose should be given in the clinic
Patient will stay in clinic for an hour afterwards for observation in waiting room.
Epi-pen to be available during observation in the clinic.

If there are no problems with the first dose, then the patient may go home and continue medicine as prescribed. If a rash or any concerns come up, the patient should be brought back to clinic and a telemed picture and RMT should be sent in for provider review and pediatric consult if required.

Rash with amoxicillin is common in infants and young children and it is usually OK to continue the medicine unless the patient develops true hives, face swelling or difficulty breathing.

See **MY** GR Powerpoint Stamping Out Amoxicillin Allergy: Wiki >Patient Care Resources>Presentation

HOW TO REMOVE AN ALLERGY BANNER IN RAVEN

- Click on the banner
- Double click on the drug
- Change **4. Allergy details**> Status from Active to Canceled
- Add Comment (5) describing why you are canceling allergy banner and documenting caretaker's agreement.
- Click on Apply
- Click on OK
- It will let you know it is reverting to 'No Known Allergies' if there are no others on the banner

Don’t Forget Bleach Baths

- They cure everything!!!
- Even Chickenpox and Amoxicillin Allergies ☺
- Patients in the village, even without running water, can do dilute bleach therapy.
- Instructions are in RAVEN patient education: Bleach>Contains>ALL-see next slide for content

Bleach Baths

Patients who have recurrent or severe skin infections such as boils/abcesses, cellulitis, impetigo, or infected eczema may have bacteria living on their skin (colonized) that can be treated with soaking in baths with a small amount of household bleach added (swimming pool strength). By killing the bad bacteria on the skin, there is less chance of getting future infections.

Dilute bleach baths should be taken every day for a week, then the baths can be taken 1-2 times per week to help prevent the bad bacteria from re-colonizing the skin and causing more skin infections.

INSTRUCTIONS:

<u>For a standard sized tub</u>

Fill the tub with water and add ¼ cup of household bleach

Soak in tub for at least 20 minutes and wet head, body and face

Soap is not required

<u>For smaller amounts of water</u>

Use 1.5ml of household bleach for every gallon of water to be used. Please make sure you have a syringe to measure the amounts listed below and that you understand the instructions on exactly how to mix the dilute bleach water you will be using. The final solution should smell like swimming pool strength and no stronger

You can soak in a small tub and/or use a sponge or rag to wash the body, face and head. Pat dry with a towel that will not fade. No need to rinse with clear water.

EXAMPLES:

1.5 ml of household bleach for 1 gallon of water

4.5 ml of household bleach for 3 gallons of water

7.5 ml of household bleach for 5 gallons of water

15 ml of household bleach for 10 gallons of water