Childhood Rashes

Common, Uncommon and Masqueraders

K. Jane McClure 5/31/22

Objectives

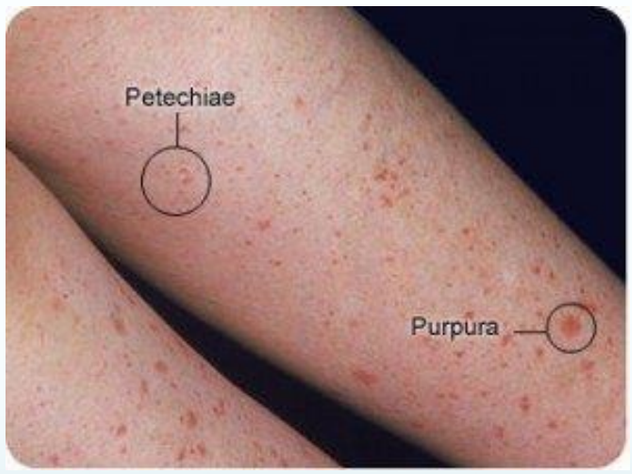
- Improve knowledge and recognition of common pediatric rashes and their causes
- Provide information to help differentiate common, non concerning viral rashes from more serious rashes
- Review and compare presentations of common and uncommon rashes and their causes
- Present information and ways to reassure caregivers about non concerning rashes AND to prepare them for the usually long clinical course of these rashes

Derm Nomenclature

- Macular
- Papular
- Maculopapular
- Hive Like/Urticarial
- Vesicular
- Vesiculo pustular
- Sandpaper
- Erythematous
- Serpigenous
- Reticular

A quick review of nomenclature

Petechia and Purpura



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

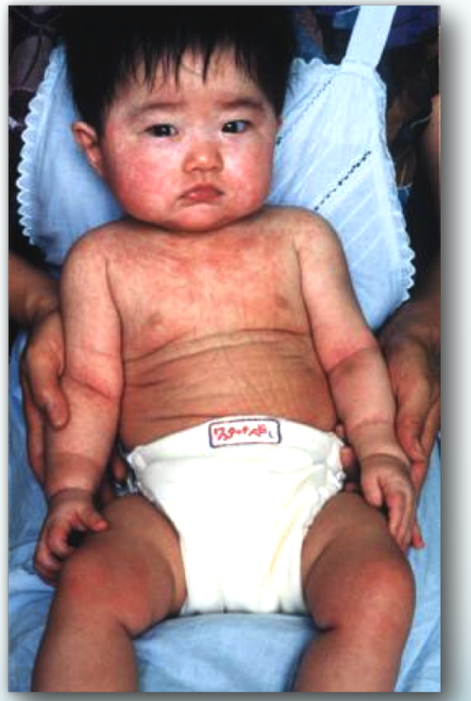
✓ **Meningococcus**
✓ **HSP**
✓ **Thrombocytopenia**
✓ **Disseminated infections/Sepsis**
✓ **Autoimmune disease**
✓ **AND in normal kids on face from hard crying or a around tourniquet site**

Common Viral Rashes

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

Roseola

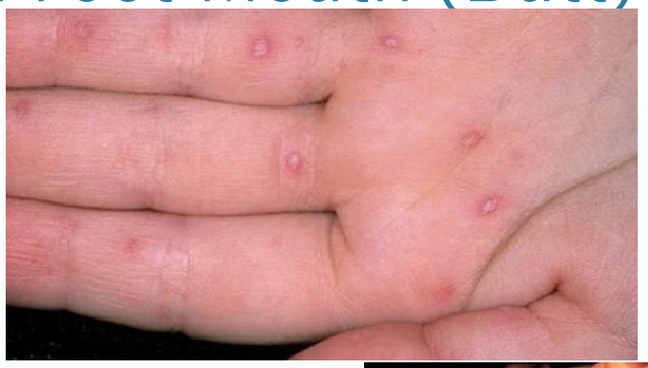
- HHV6
- Usually seen in 6-15 month olds.
- High fever followed by a rash in well appearing infant or child.
- Starts on neck/trunk and spreads to extremities
- Erythematous, blanching, and macular or maculopapular
- Often mistaken for amoxicillin allergy!

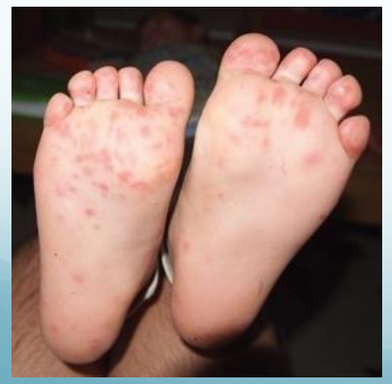


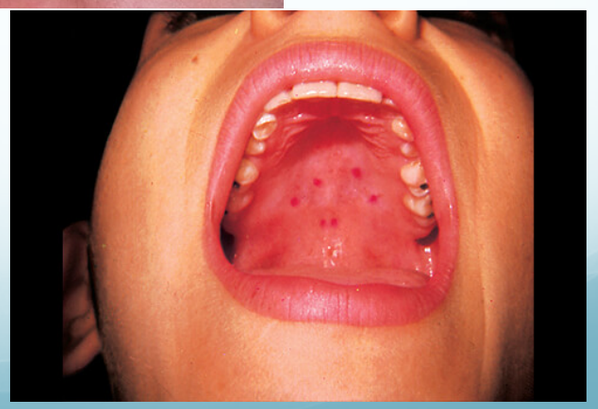
Slapped Cheek/Fifths Disease/Parvo Virus

- Fifths or Slapped Cheek Disease Caused by Parvovirus B19/ Erythema infectiosum
- Distinctive bright red cheeks and maculopapular rash on chest
- Rash on chest followed by an erythematous reticulated (giraffe-like rash pattern) that waxes and wanes for 4-6 weeks afterwards
- Lacy extremity rash returns and gets worse with fever, heat or trauma

Hand Foot Mouth (Butt) Disease

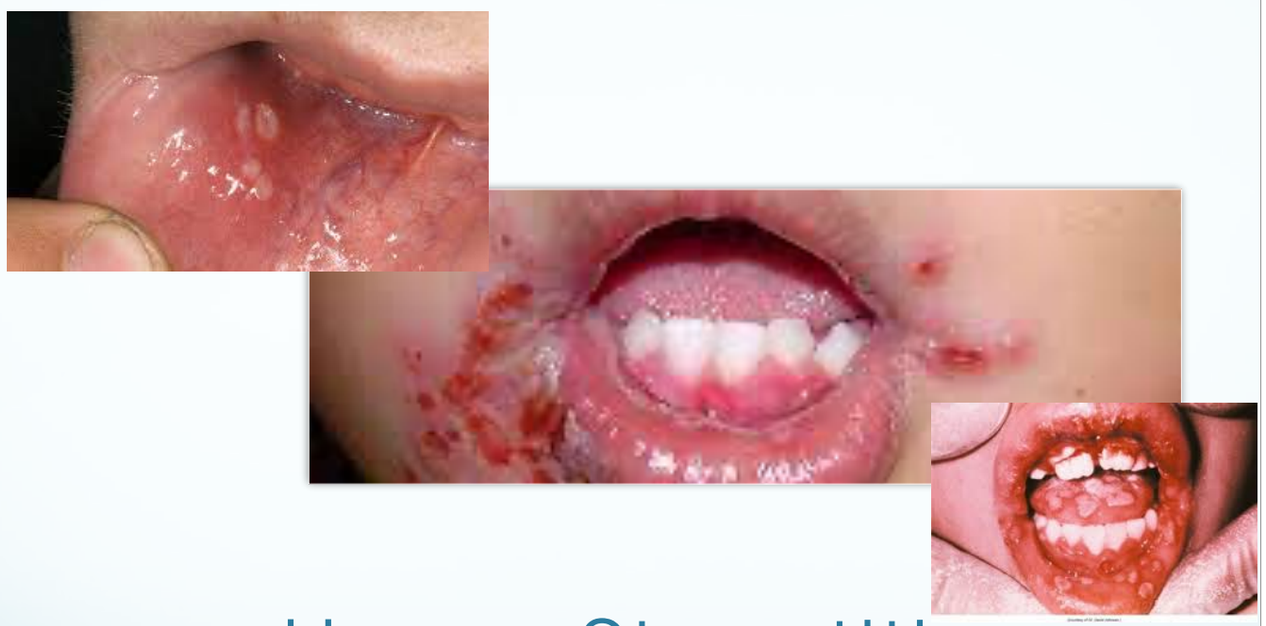






HFMD/Coxsackie Virus

- Hand Foot and Mouth Disease (Coxsackie Virus, HFMBD) Usually <5 years.
- Involvement of the hands & feet, mouth sores and rash on body Classically on palms, soles and in mouth, but...
- There may only be lesions in mouth, or just on the hands or feet
- Can also present with a dense macular papular rash on body, buttocks and extremities.
- Oral lesions are typically posterior pharyngeal compared to stomatitis which is usually in the anterior part of the oral cavity
- There can be nail sloughing 2-3 weeks after lesions on hands and feet, but family needs to know that nails grow back
- Commonly mistaken for chickenpox... but chickenpox does not appear on palms and soles and chickenpox lesions are in more distinctly different stages of eruption



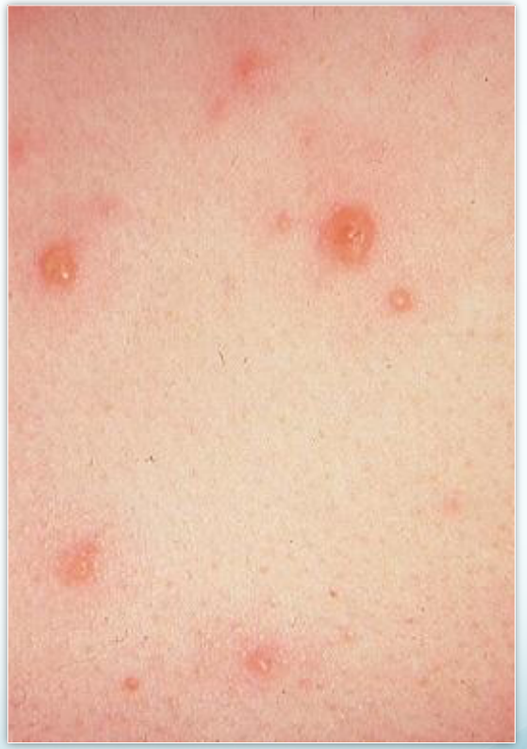
Herpes Stomatitis

- Herpes Stomatitis (Herpes Simplex)-6 months to 5 years for the first (usually more serious) infection

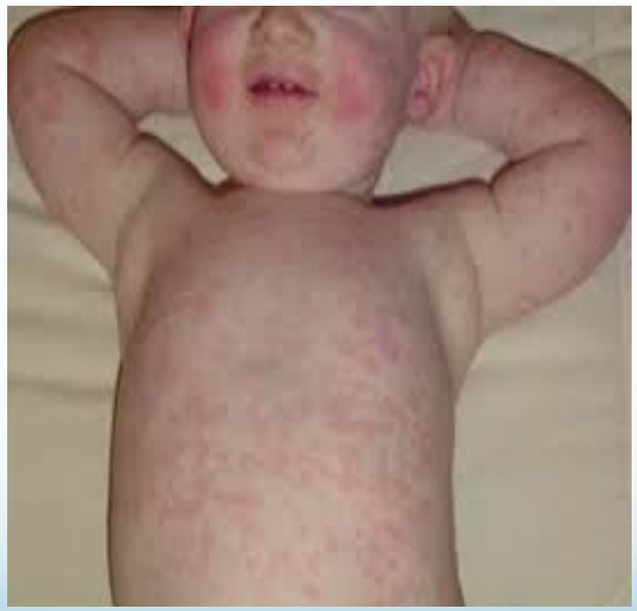
- **Viral infection that causes sores and ulcers both inside and outside of the mouth**
- **Generally found in the anterior part of mouth compared to coxsackie virus which is posterior**
- **Can be recurrent, but 1st episode is usually the worst**
- **Can be mistaken for**
    - **canker sores**
    - **Herpangina**
    - **thrush**
- **Requires supportive care…acyclovir should not be used except in severe cases within 72 hours of onset, in cases of eczema herpeticum or in immunocompromised patients**

Varicella Zoster

- Chicken Pox is no longer a common childhood rash, but it is a commonly misdiagnosed rash.
- Usually in school age children
- New crops daily. Lesions in different stages at the same time. Itchy papule progress to vesicles (sometimes pustules) and then to crusted over lesions
- New eruptions occur in crops daily for several days
- Lesions are typically present in all 3 stages of development at the same time
- Start on chest, back and face and then spread to the entire body
- Vesicles are described as “dewdrops on a rose petal” but this is not such a classic finding



Viral Rashes



- **There are many of them**
- **Hard to diagnose**
- **Get better on their own**
- **Rule out worst case scenarios and reassure care takers**
- **Don’t want to diagnose an amoxicillin (or other drug) allergy without a good history for a true allergy**
- **Think Horses not Zebras**

Viral Rash Reassurance

- Speak authoritatively about a rash being one of many childhood rashes.
- Use phrases like ‘very common’, ‘looks scary, but is not dangerous’
- You can also ask the caretaker what they are most worried about and address their concern specifically.
- Let caretakers know that, based on history and clinical presentation, it is not a bad bacterial infection or serious allergic reaction.
- Prepare family for long clinical course. The child will slowly get better, on their own, with supportive care in 5-7 days, but that the rash may last up to 1-2 weeks or in some cases longer.

HISTORY HISTORY HISTORY

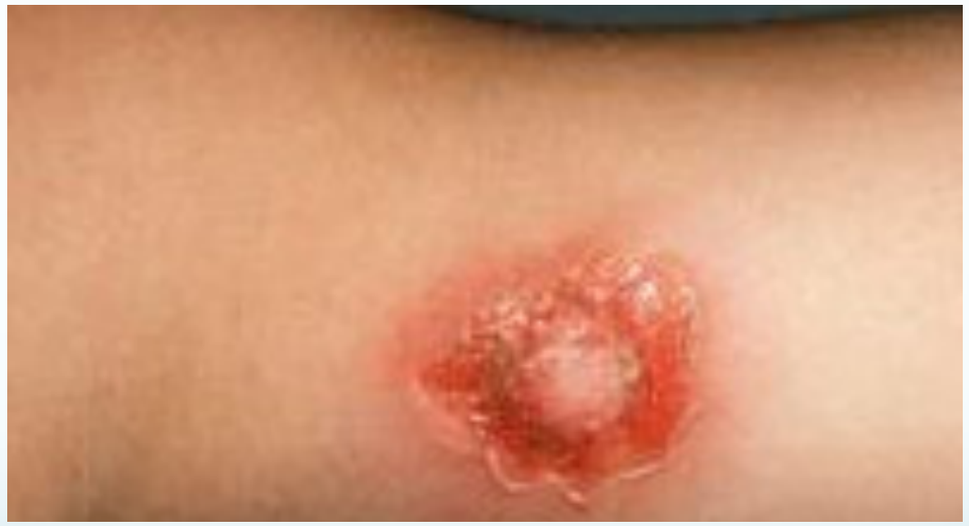
RASHES ARE HARD TO DIAGNOSE/DIFFERENTIATE
AND THEY OFTEN LOOK WORSE THAN THEY ARE

HISTORY REALLY HELPS

- Recent illness? When did the rash start… before, during, or after illness or fever?
- Contact irritants or exposures?
- New medications?
- Other family members with rashes? and look at those rashes too for clues!

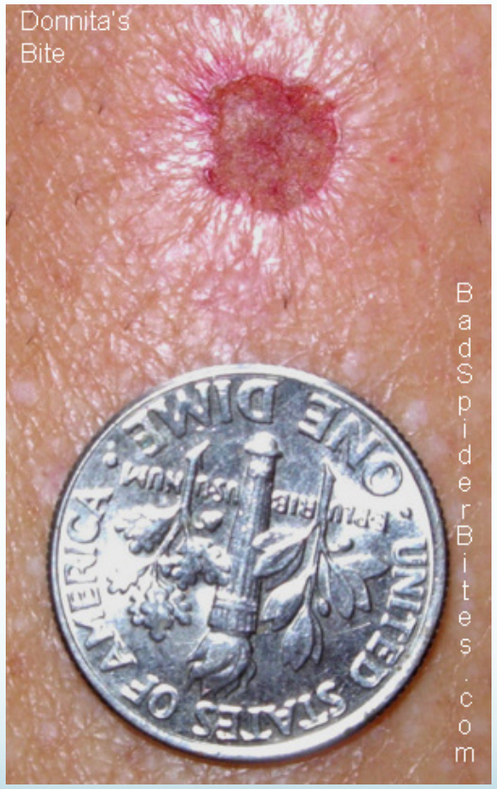
The next slides I am going to show you will test your differential diagnoses of rashes that may look very similar

Common Masqueraders

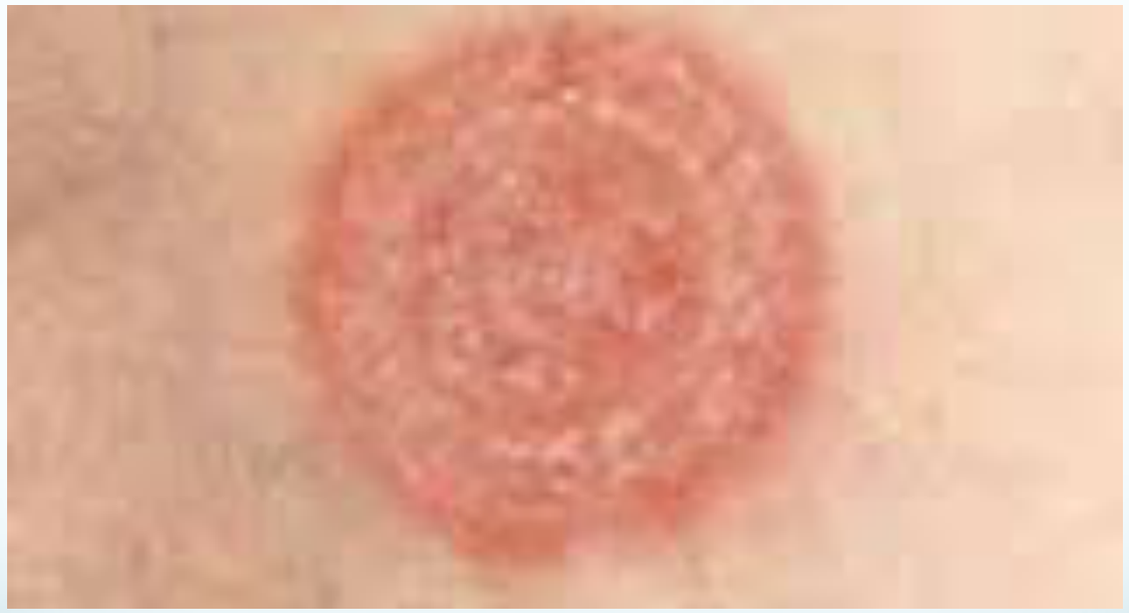


DD: Ringworm, Cigarette burn, Nummular eczema
DX: Strep skin infection (ecthyma)

- **Slow intense expansion of infection from center out.**
- **Indolent and ugly.**
- **Punched out looking**
- **Expands with rings.**
- **Defined borders without surrounding erythema**

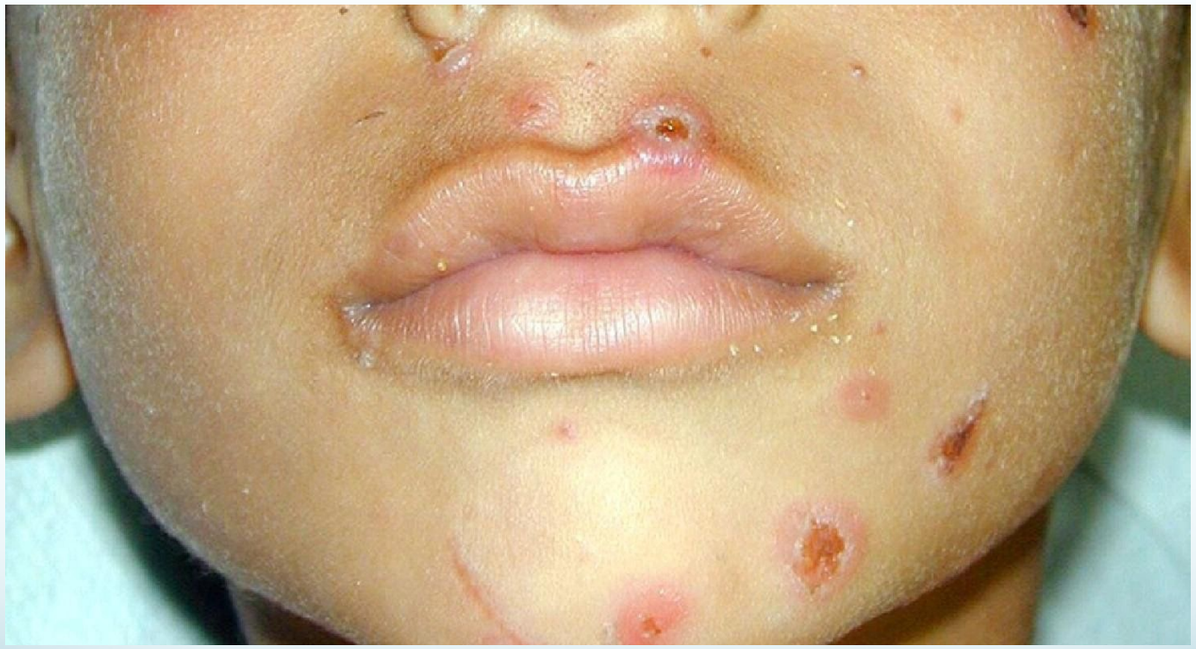


DD: Echthyma, Impetigo, Healing ulcer, Fungal infection, Cigarette burn
DX: Insect Bite
- **Smaller**
- **Less angry**
- **Non purulent (unless super infected)**

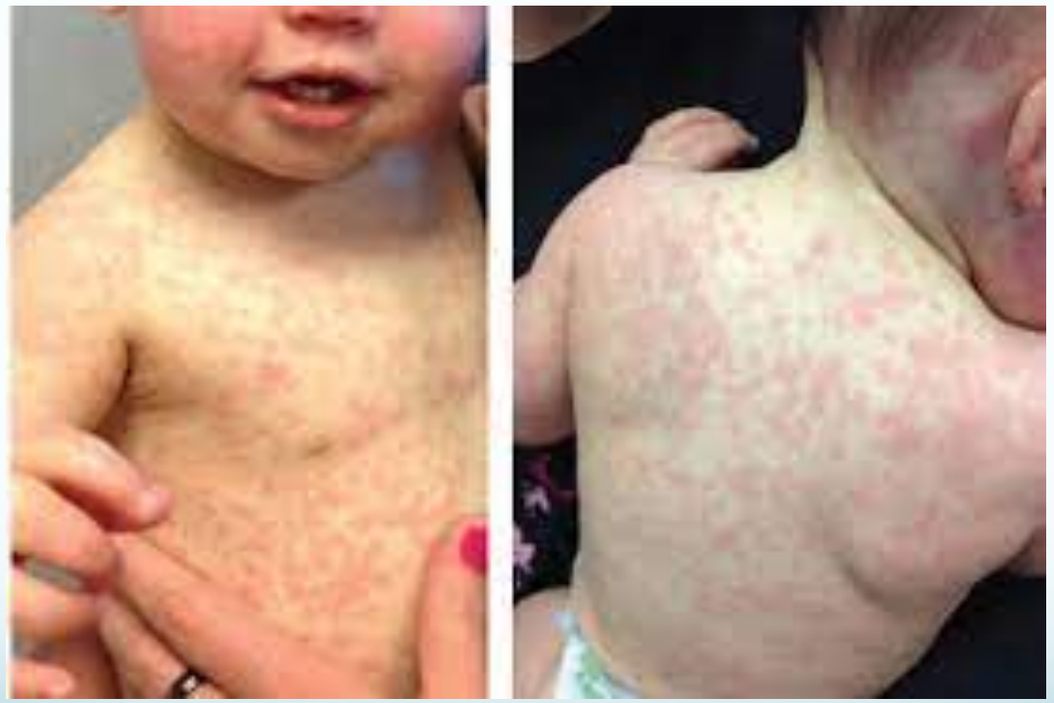


DD: Strep infection, Nummular Eczema, Cigarette Burn, impetigo
DX: Ringworm

- **Round**
- **Concentric rings with ridges (rolled edges)**
- **Non painful**
- **May be itchy**
- **Nonpurulent**
- **Well circumscribed**



DD: Strep, Ringworm, Impetigo, Viral Stomatitis, Varicella
DX: Cigarette burns
- **Uniform in size**
- **Cigarette burns are circular and typically seen in groupings on the face, back or extremities**
- **Generally diameter of 0.5 to 0.8 cm with a well-defined smooth edge**
- **Lesions in various stages of healing**
- **Often misdiagnosed as bullous impetigo or chickenpox**



DD: Roseola, Slapped Cheek (Parvo), Scarlatina,
DX: Amoxicillin Rash

- **Typical presentation:** high fever, pt is seen and diagnosed with an ear infection, started on amoxicillin, deferveces, rash appears, amoxicillin allergy is diagnosed and patient is labeled as having an amoxicillin allergy
- **Labeling a patient penicillin allergic is a problem as it actually increases risk of patient morbidity and mortality due to future withholding of penicillins when needed and inappropriate and potentially dangerous use of broad spectrum antibiotics**
- **REMEMBER-A true amoxicillin allergic reaction occurs shortly after exposure and causes hives and/or other evidence of hypersensitivity reaction such as difficulty breathing, irritability and oral/facial swelling**

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Clinical Guideline

Amoxicillin Allergy Trials (Pediatric)

Background

• Only 4-9% of those...labeled [penicillin-allergic] are currently allergic. It is important to identify those who are not allergic, because children mislabeled as penicillin-allergic have more medical visits, receive more antibiotic prescriptions, and have longer hospitalizations with more antibiotic-related complications.[1]
• Up to 10% of children develop rashes while receiving antibiotics. Most are diagnosed...as allergic to the implicated antibiotic, and most continue to avoid the suspect antibiotic in favor of alternatives, which may be less effective, more toxic, and more expensive.[2]
• Do not label a patient as allergic to penicillin/ amoxicillin unless he or she has true hives, anaphylaxis, or a life-threatening reaction. Please include photos of rashes in RAVEN.
• Children labelled as allergic to penicillin/amoxicillin often carry that label for the rest of their lives.
• Please consult a pediatrician with any questions.

Patient labeled with a penicillin/ amoxicillin allergy.

Review history. (See box.)

Was the reaction anaphylaxis (see box) or other life-threatening reaction (eg Stevens-Johnson syndrome, etc.)?

Yes → • Do not give drug or perform trial. • Update chart, including the Problem List and a comment on the allergy. • Refer to Allergy & Immunology at 5.

No

What was the reaction?

History

Chart review:
• Review notes in allergy alert. Find date allergy was added, and then review notes from that day. Was ED visit or hospital admission required?
• Review Multimedia Manager photos.
• Were steroids or other treatment given?
• Has patient received a drug of the same class since the allergy was reported? Was it tolerated? Were there symptoms?

History from patient/family:
What was the reaction?
- Vomiting and/or diarrhea?
- Rash?
  - Age? Time from first dose?
  - Hives? (See box.) Was it itchy?
  - Blistering or peeling?
  - Photos from family?
- Trouble breathing?
- Swelling of tongue/lips?
- Joint swelling or fever?
- Mucous membrane involvement?

Anaphylaxis

• Acute onset – several minutes to hours from exposure.
• Generalized hives, pruritis or flushing, swelling of lips/tongue/uvula, and at least one of the following:
  Dyspnea, bronchospasm, stridor
  Hypotension
  Evidence of hypoperfusion of end-organs
  Persistent crampy abdominal pain, and/or vomiting or diarrhea

Hives vs Viral Rash

• True hives are raised, itchy, larger than dime-sized, come and go, move around the body, and change shape and size. True hives are uncomfortable. Ask if the rash bothered the child.
• Keep in mind that many parents refer to any rash as "hives." Get a description every time.
• A viral exanthem is typically diffuse, fine, pinpoint red dots and can be dense, coalesced, larger raised lesions. The rash typically covers the face and chest but can cover the whole body. The rash typically worsens and takes days to clear.

Rash

- True hives, skin blistering/peeling, or mucous membrane involvement → • Do not give drug or perform trial. • Update chart, including the Problem List and a comment on the allergy. • Refer to Allergy & Immunology at 5.
- Viral-appearing rash or other type of rash → **Not a true allergy.** • Educate and perform Amoxicillin Trial (see box). • If patient/family refuses trial, update Problem List. • Offer future trial or refer to Allergy & Immunology at age 5 for amoxicillin allergy testing.

Vomiting and/or diarrhea without any other SIBx anaphylaxis → **Not a true allergy.** • Educate and perform Amoxicillin Trial (see box). • If patient/family refuses trial, update Problem List. • Offer future trial or refer to Allergy & Immunology at age 5 for amoxicillin allergy testing.

Other → Get more history. Consider pediatric consult.

Amoxicillin Trial Procedure[2]

Use AMB Amoxicillin Trial Power Plan.

1. Obtain VS. Perform physical exam, including lung exam. Have appropriate dose of EpiPen or epinephrine. Epinephrine (1 mg/mL): 0.01 mg/kg (or 0.01 mL/kg) IM Q5-15 minutes.
Per AAP recommendations:
  • 7.5-25 kg: use EpiPen Jr (0.15 mg)
  • ≥ 25 kg: use EpiPen (0.3 mg)
2. Calculate weight-based dose of amoxicillin. Give patient 10% of that dose.
3. Place patient in nearby room and instruct caregiver to notify staff of any changes in status.
4. If no reaction by 20 minutes, give patient remaining 90% of weight-based dose of amoxicillin.
5. Observe another 60 minutes. If no reaction, check VS and physical exam. If all stable, discharge home with regular course of drug.
6. Give patient and family amoxicillin trial education sheet.
7. Update allergy alert in RAVEN. Click the allergy in the banner. Right click over the drug name and choose "cancel." On the "reason" drop-down menu, choose "OK on Retrial."

Notes:
• If patient is on a beta-blocker, stop this for 24 hours prior to procedure, if possible. Beta-blockers can interfere with treatment for anaphylaxis, if it occurs.
• Ensure that patients with asthma have optimal control prior to this procedure.

References

1. Kelso JM. "Provocation challenges to evaluate amoxicillin allergy in children." JAMA Pediatrics 2016;170(8):e160282.
2. Mill C, et al. "Assessing the diagnostic properties of a graded oral provocation challenge for the diagnosis of immediate and nonimmediate reactions to amoxicillin in children." JAMA Pediatrics. 2016;170(8):e160033.

- **Remember-there is a great Amoxicillin Allergy Trial Guideline on the WIKI!**
- **This guideline summarizes the history and clinical information you need to differentiate between an amoxicillin rash and a true allergy AND it outlines a step by step guide for determining who qualifies for an amoxicillin trial and how to do it.**
- **Amoxicillin trails can be done in the clinic, ER, inpatient,SRCs and in villages.**

Example Auto text for RMT For Amoxicillin Trial

Autotext: ..rmtamox

ASSESSMENT:

- Patient's history and medical records were reviewed and the patient does not have any evidence of a true allergy to amoxicillin.
- CHA and family are OK with trial of Amoxicillin

PLAN:

- Recommend Amoxicillin trial in clinic today.
- Document vitals, physical exam and good lung exam
- Have epinephrine available.
- Mix Amoxicillin
- Draw up a CHAM, weight based dose of Amoxicillin.
- Give the patient 1/10th of the dose in the clinic.
- Have patient remain at the clinic for 20 minutes for observation. Caretaker is to alert the CHAs of any concerns.
- After 20 minutes, if there are no problems, the patient may be given the rest of the dose of Amoxicillin.
- Have patient remain at the clinic for another hour for observation in waiting room..
- If there are no problems tolerating the test doses, 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 the provider to review and get a pediatric consult if required.
- Give Amoxicillin Rash Handout to family to take home. 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.

There is also an amoxicillin trial auto text for RMT available and …

PEDS-patient education
Amoxicillin Rash

WHAT IS AN ANTIBIOTIC RASH?

An amoxicillin, Augmentin, or penicillin rash is a non-allergic rash that can occur when a child is taking one of these medicines. The rash usually appears 2-5 days after the child starts taking the medicine but may appear earlier or as late as the 16th day. Again, this rash is NOT an allergy. Symptoms of the rash include:

- Small (less than ½ inch) widespread pink spots in a symmetric pattern or slightly raised pink bumps.
- Small, flat, non-itchy spots.
- Appearing on on the chest, abdomen, or back and usually involving the face, arms, and legs.

WHAT IS THE CAUSE?

Up to 10% of children taking amoxicillin, Augmentin, or penicillin get a non-allergic rash. These rashes are often caused by a viral infection such as Roseola. These are harmless rashes and do not mean that your child has an allergy to amoxicillin, Augmentin, or penicillin. An allergic reaction would cause hives (a different type of rash) or more severe symptoms.

HOW LONG DOES IT LAST?

The rash usually lasts 3 days but can last up to

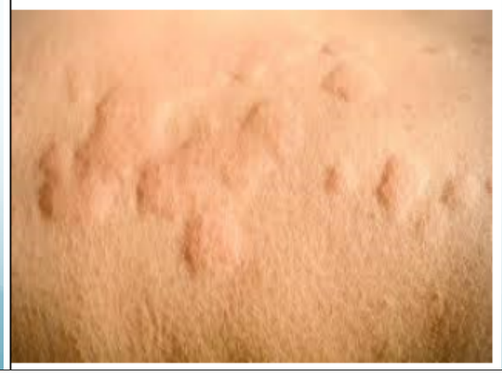
HOW IS IT TREATED?

- No treatment is necessary, and the rash is not contagious
- Keep your child on the amoxicillin or other penicillin drug until the medicine is gone.
  - Stopping the medication can incorrectly label your child as allergic to the penicillin-family of antibiotics, which leads to other problems in the future.
  - A different antibiotic may not be necessary and could cause other problems.
- Stopping the medicine will not make the rash disappear any faster.
- Your child can take amoxicillin, Augmentin, or penicillin in the future when necessary. Only 5% of children get a rash again the next time.

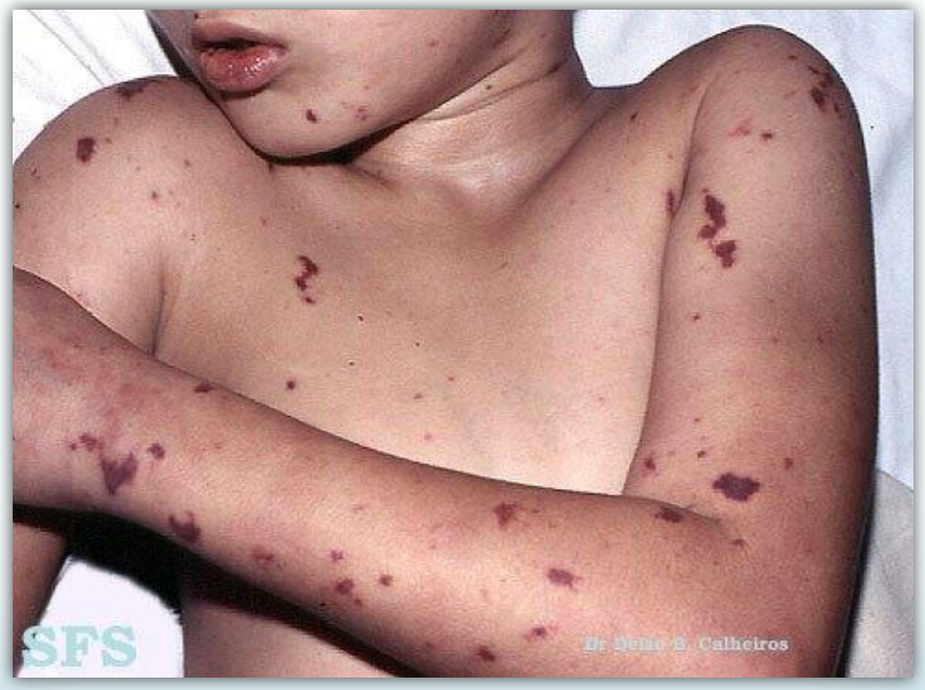
WHEN SHOULD MY CHILD GET MEDICAL CARE?

- If the rash changes to hives, which are raised, itchy, and move around.
- If the rash becomes intensely itchy.
- If the rash becomes a lot worse or lasts more than 6 days.
- If your child has sudden onset of rash (within two hours of the first dose), any breathing or swallowing difficulty, or swelling of lips/face/tongue.
- If you have other concerns or questions.

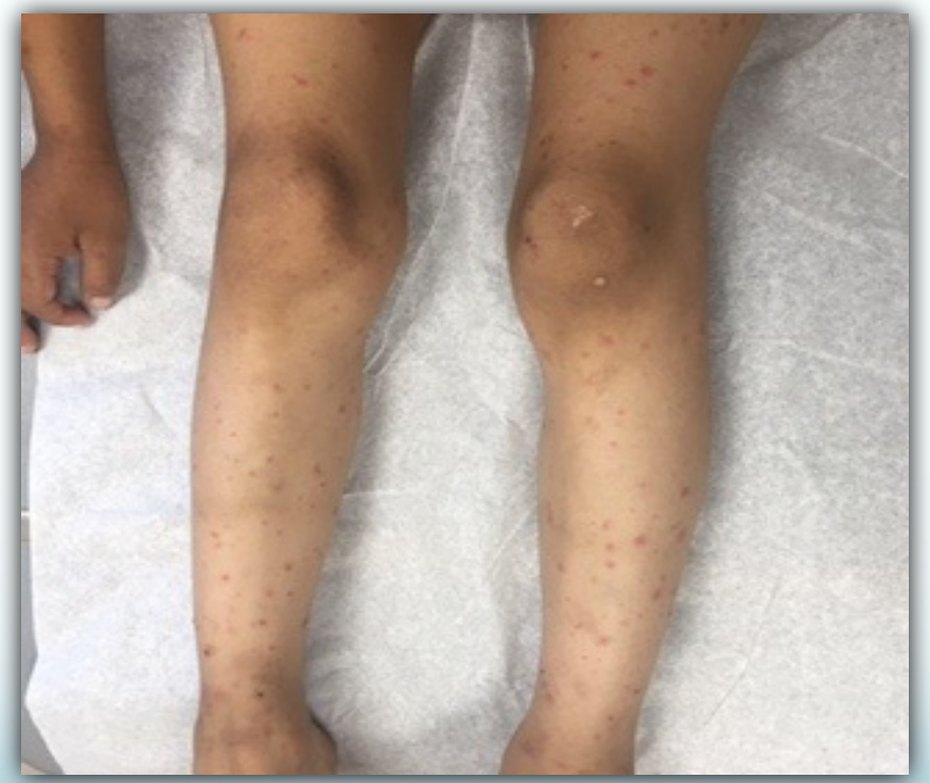
HIVES



There is a good RAVEN pediatric patient education handout available for families

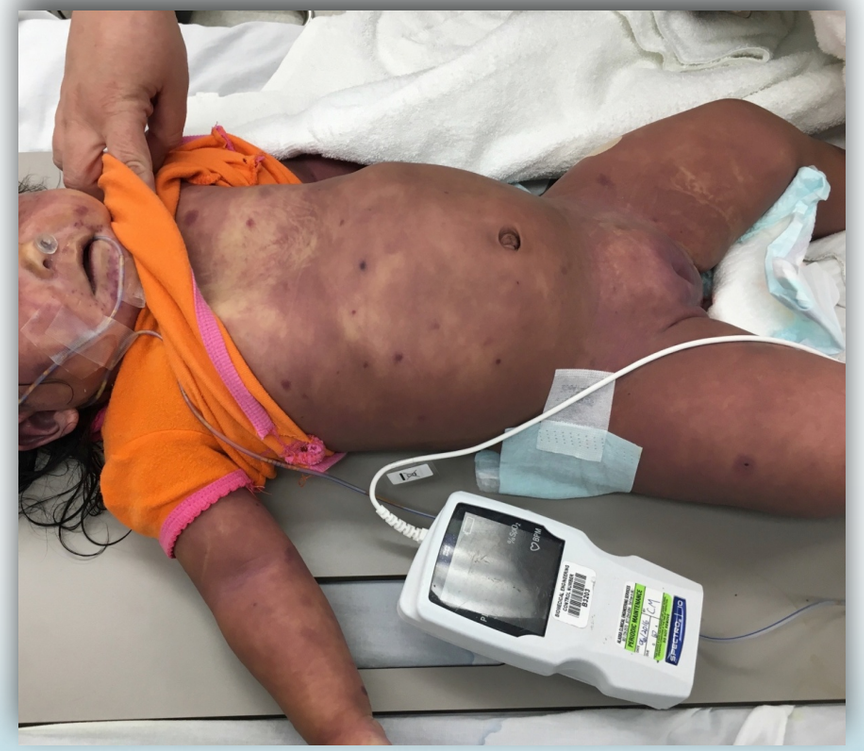


DD: HSP, Sepsis, Thrombocytopenia, Abuse
DX: Meningococcus

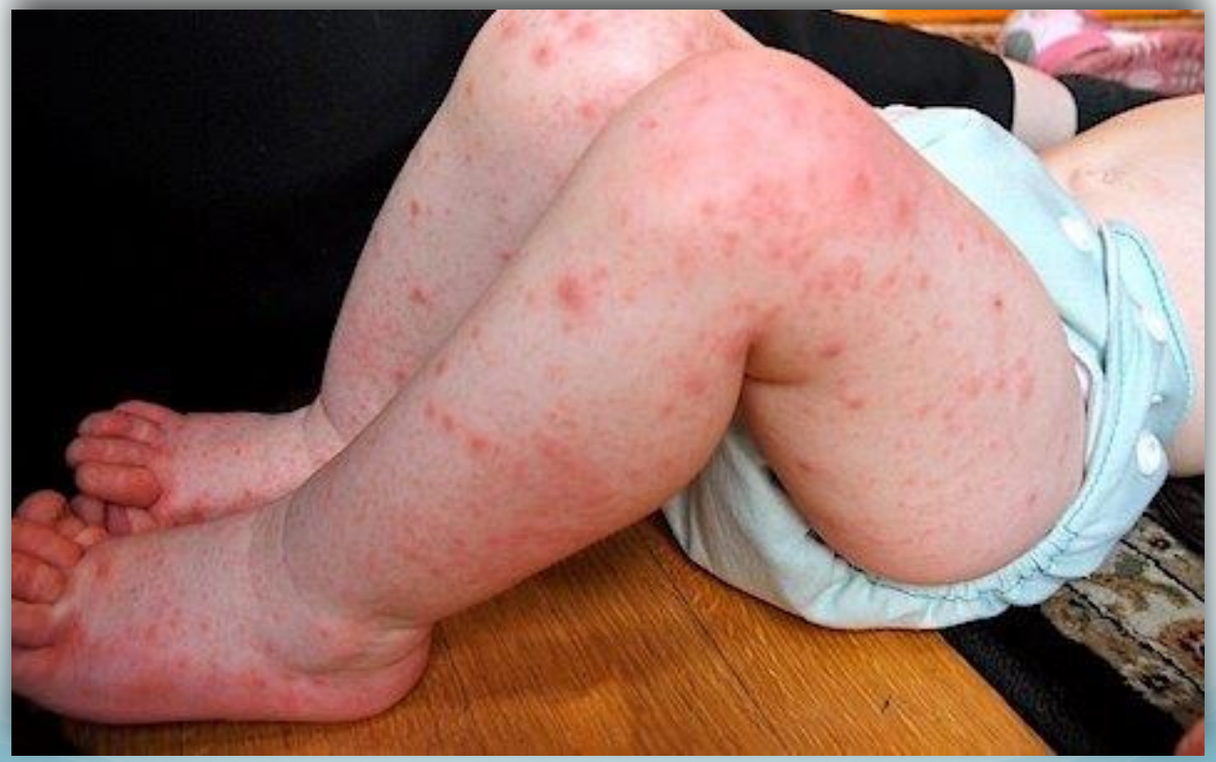


DD: Sepsis, Meningococcus, HSP
DX: Henoch-Schonlein purpura (HSP)

- **Vasculitis of skin, intestines and kidney**
- **Most common in children between the ages of 2 and 11.**
- **Probably an autoimmune disease triggered by drugs, infection, or environmental exposures**
- **Main presentation is triad of rash, joint pain and swelling, abdominal pain**
- **Often with hematuria due to kidney vasculitis**
- **Rash and purpura are usually seen on lower extremities over the legs and/or buttocks.**

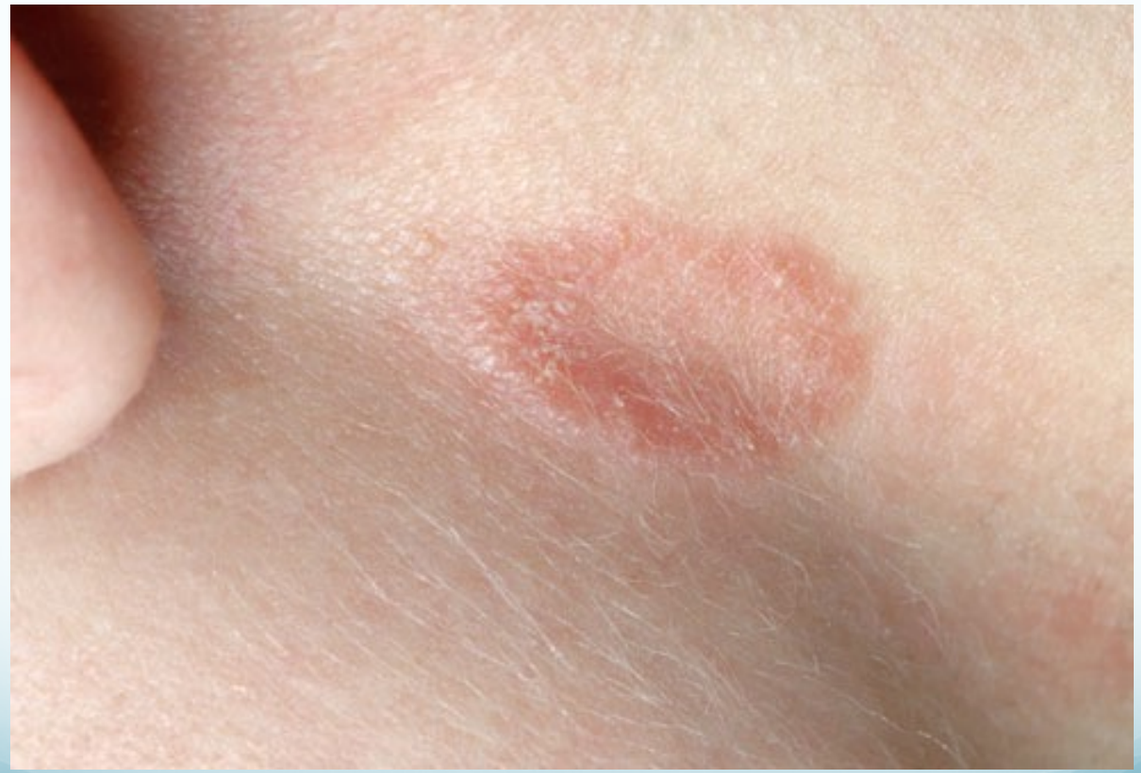


DD: Trauma, Abuse, Sepsis, Shock
DX: HIA Sepsis and Shock

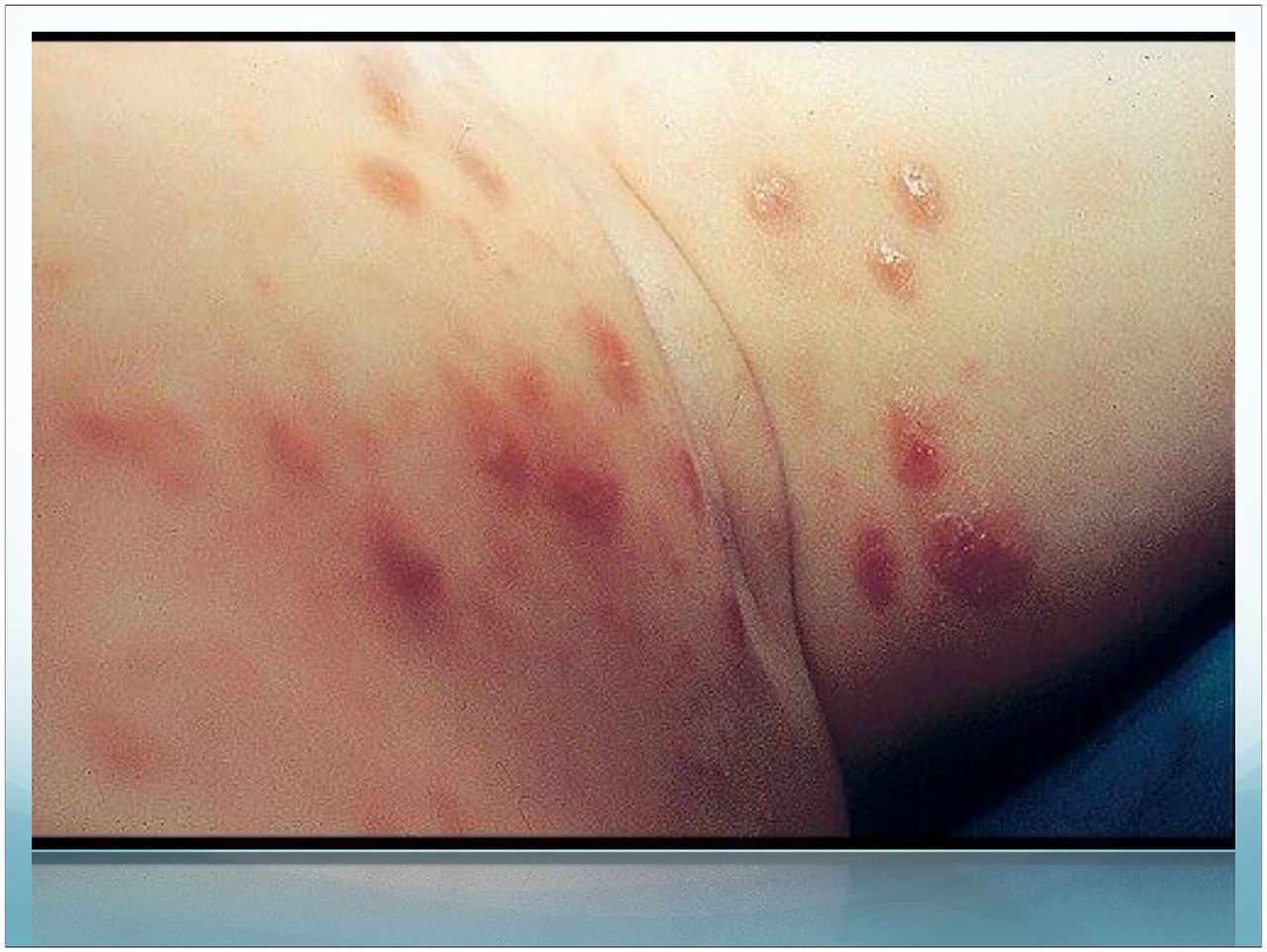


DD: Chickenpox, Allergic reaction, Impetigo, Scabies
DX: HFMBD

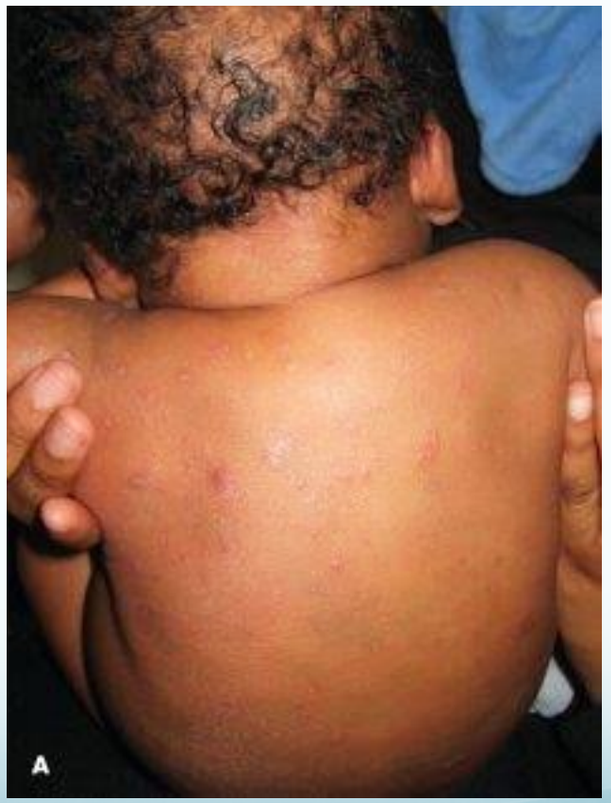
DD: Contact dermatitis, thrombophlebitis, phytodermatitis,
DX: Cellulitis with lymphangitis
Usually rapidly progressive and caused by strep



DD: Nummular eczema, Healing cigarette burn, Impetigo
DX Ringworm

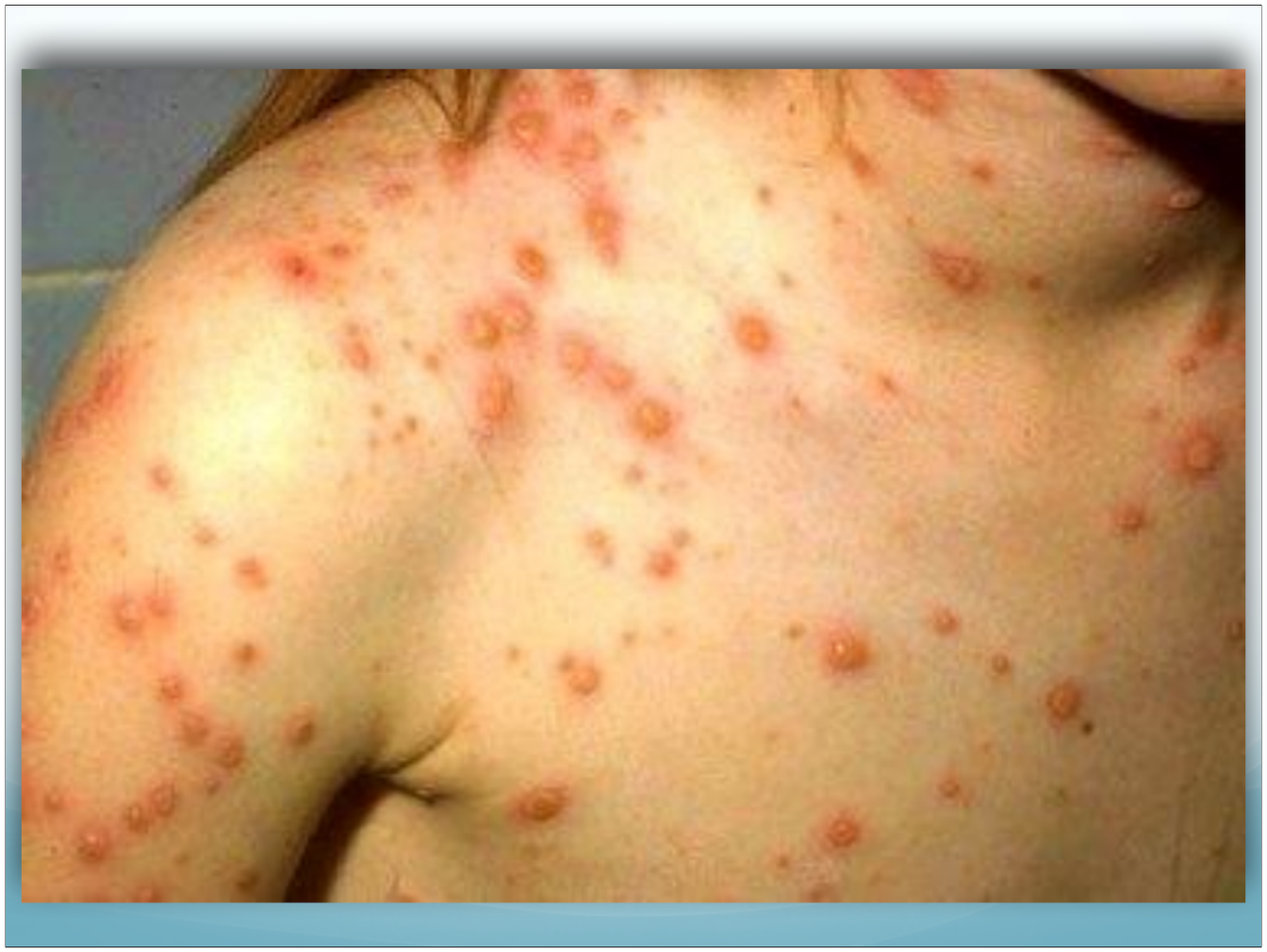


DD: Chickenpox, Impetigo, HFMD, Folliculitis
DX: Scabies
- **Often under arms and on the trunk of infants and toddlers**
- **Remember to always check for evidence of scabies on caretakers or other close contacts**



Also a picture of scabies.

- **Remember that the distribution is different in young children. Not the usual finger webs, wrists, armpits, waist involvement seen in adults**
- **With babies and young children, the rash is often under arms, on trunk and on back due to repeated contact with caretakers with scabies picking the children up under their arms**



DX: Chickenpox.

- **New crops daily**
- **The rash has varying stages of healing with some new juicy lesions, some with crusting and some dry ulcerated ones.**
- **If you really think it is chickenpox (which it usually is not)…**

Consult the Varicella Guideline on the WIKI

Yukon-Kuskokwim HEALTH CORPORATION

Clinical Guideline

Varicella, Suspected

True Varicella infection is RARE in our region:

1. **DO NOT diagnose Varicella** without confirmatory lab testing.
2. Per the CDC:
   - Two doses of VZV vaccine are 88-98% effective at preventing all VZV infections.
   - One dose of VZV vaccine is 80-85% effective at preventing all VZV infections.
3. All confirmed Varicella must be confirmed to State Epidemiology with this form: http://dhss.alaska.gov/dph/Epi/Documents/pubs/conditions/frmInfect.pdf

Differential Diagnosis

- Hand-foot-mouth disease
- Scabies
- Stomatitis
- Eczema herpeticum
- Diffuse impetigo

Provider Documentation for Suspected Varicella Infection

- Date of symptom onset
- Date of suspected diagnosis
- Date of rash onset
- Location of rash, including where first noted
- Number of lesions
- Photos of lesions
- Evolution of rash (including appearance of new groups of lesions)
- Appearance of lesions (are there lesions in all stages of development at once?)

High Risk Exposures

- Inquire if any pregnant women or immunocompromised people have been exposed.
- For pregnant women: find out if she has a history of varicella or has received the vaccine. If not, then consult HROB to consider further treatment.
- For immunocompromised patients: refer to a provider for evaluation.

Suspect Varicella clinically

↓

Obtain a thorough history and exam.

↓

Take photos and upload to RAVEN. Consult pediatrician.

↓

Suspicion for Varicella is strong enough to warrant testing.

Patient in a village or SRC

1. **Keep patient in village unless clinical condition otherwise warrants transfer to Bethel.**
2. Isolate patient at home until all lesions are covered with scabs or testing is negative.
3. Order Varicella Zoster Virus (VZV) DNA PCR.
4. Ensure lab sends viral media out to village.
5. Instruct health aide to unroof a lesion and swab it with viral media.

↓

When viral media arrives, provider or health aide should unroof a lesion, swab it, and send it for PCR testing.

Patient in Bethel

Send a Varicella Zoster Virus (VZV) DNA PCR (obtained by unroofing a lesion and swabbing it with viral media).

If unable to swab a lesion, may send:
-Varicella Zoster IgG
-Varicella Zoster IgM
Note: these tests have high false-positive results.

↓

Follow-up results. Inform patient/family.

↓

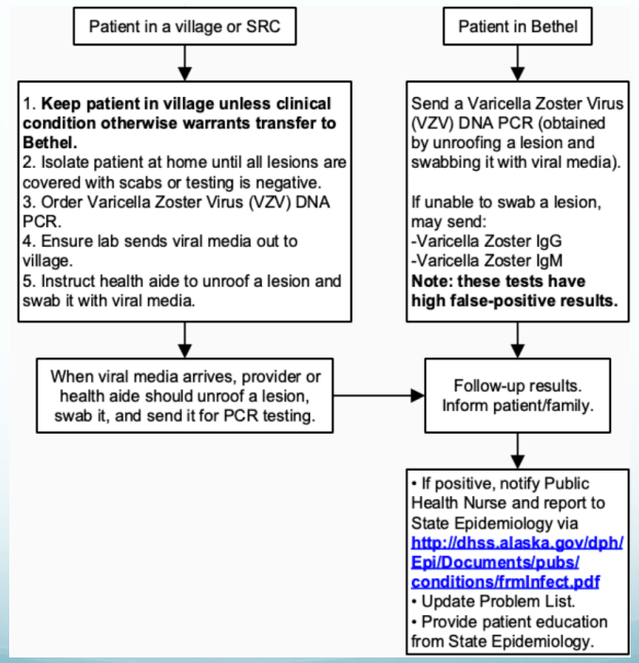
- If positive, notify Public Health Nurse and report to State Epidemiology via http://dhss.alaska.gov/dph/Epi/Documents/pubs/conditions/frmInfect.pdf
- Update Problem List.
- Provide patient education from State Epidemiology.

Typical Presentation for Chickenpox/Varicella

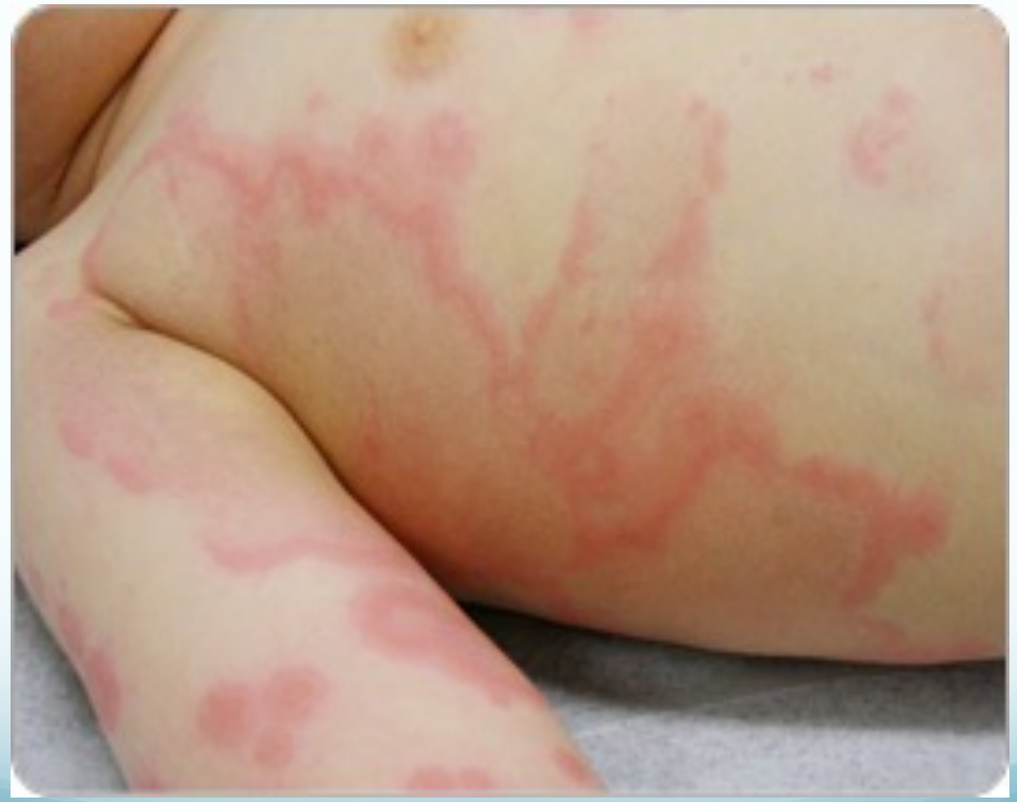
- Exposure occurs.
- 10-21 days after exposure, fever appears, followed by rash that often starts on the head and then moves down.
- Rash appears in successive crops over several days.
- Rash begins as macular and then progresses to vesicular, then pustular, then crusted.
- There are lesions in different stages of development on different parts of the body.
- New vesicles stop forming within four days.

There is a lot of information in the blue boxes about chickenpox diagnoses, high risk exposures, documentation needed for suspected varicella and how to report a PCR confirmed case of varicella.

Testing For Varicella

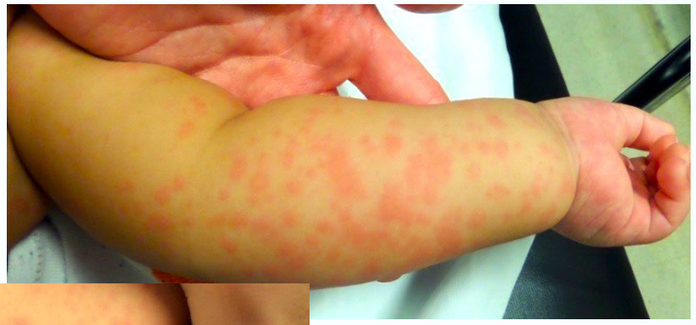


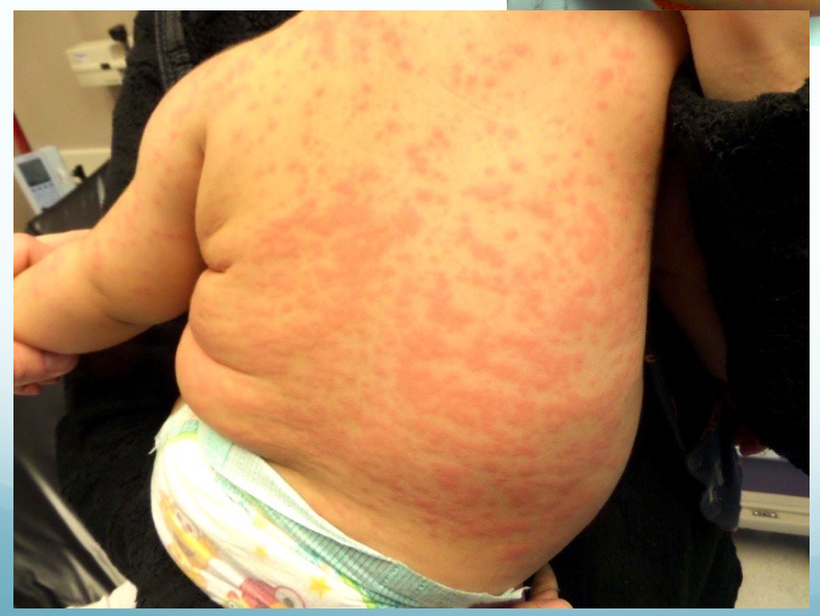
• The central algorithm portion of the guideline walks you through what to do with patients in the village or in Bethel
• Isolate (Do not put patient on a plane or bring them to the clinic or ER)
• Obtain a viral kit from lab and swab fluid from vesicles for Varicella Zoster DNA PCR.
• Continue supportive care in home.
• Report to state epi if viral PCR is positive.
Try not to order IGG/IGM varicella testing unless there is no other option. These titres are not reliable. There is no true IGM cut off defining active infection.
Use viral swabs!!!



DD: Hives, Stevens-Johnson,
DX: Erythema Multiforma
Usually seen post viral or post antibiotic…considered a delayed sensitivity reaction. Scary looking, but not dangerous.

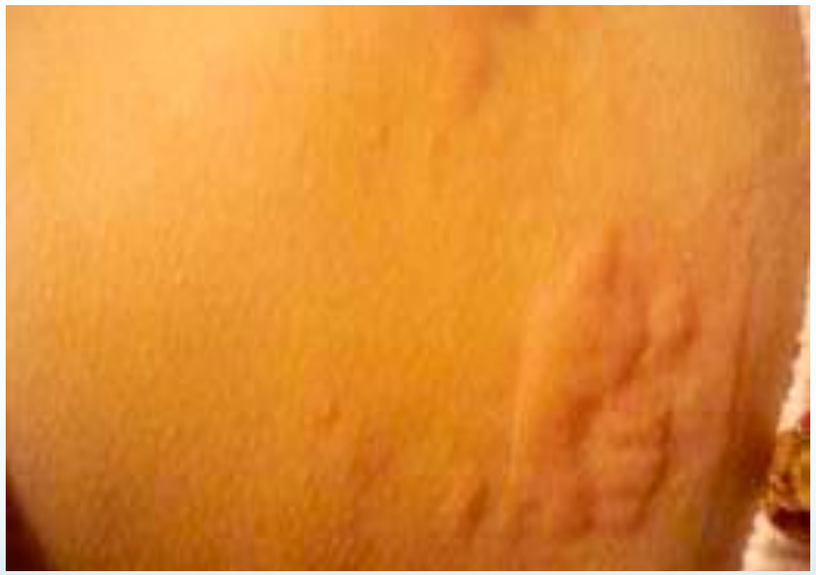
- **Usually flat.**
- **Sometimes slightly raised edges.**
- **Serpigenous and moves and changes shape.**
- **Worse with fever or heat.**
- **Waxes and wanes.**
- **May have joint swelling**
- **May have fever or not**





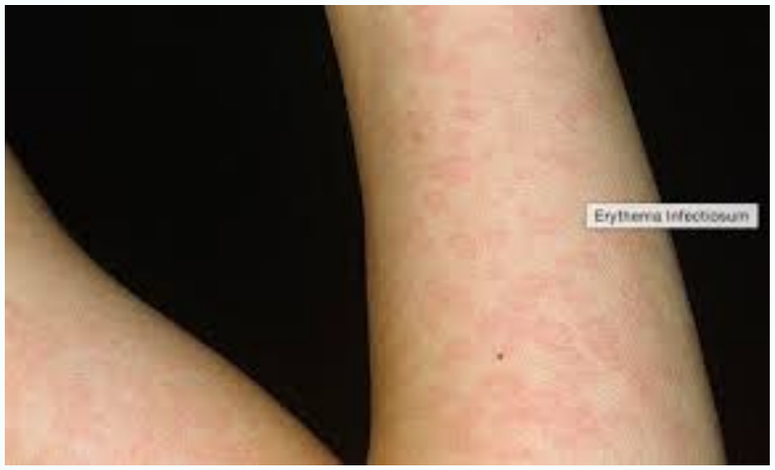
DD: Urticaria/Hives, Kawasaki, Roseola, Pityriasis Rosea
DX: Less straightforward presentation of Erythema Multiforma

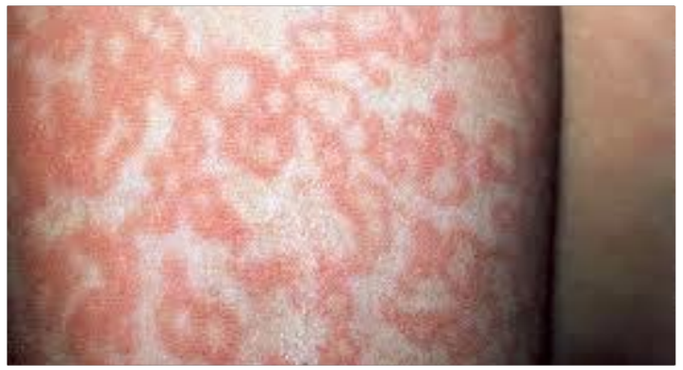
Rash is irregular, and has rings, confluence, some central clearing
More indolent than hives with more slowly changing morphology



DD: Viral Rash, Erythema Multiforma
DX: Hives

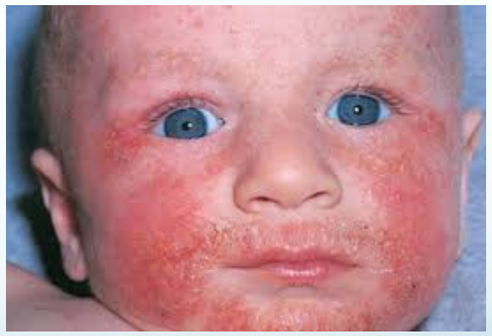
- **Can be red, flesh colored or blanched**
- **Irregular largish raised lumps/welts that move around**
- **Waxes and wanes more dramatically than EM**
- **Benadryl helps**
- **Last for up to a week or more**
- **Often recurrent**
- **Not associated with joint swelling**
- **Cause often unknown, but can be related to food, contacts, meds or even cold exposure**





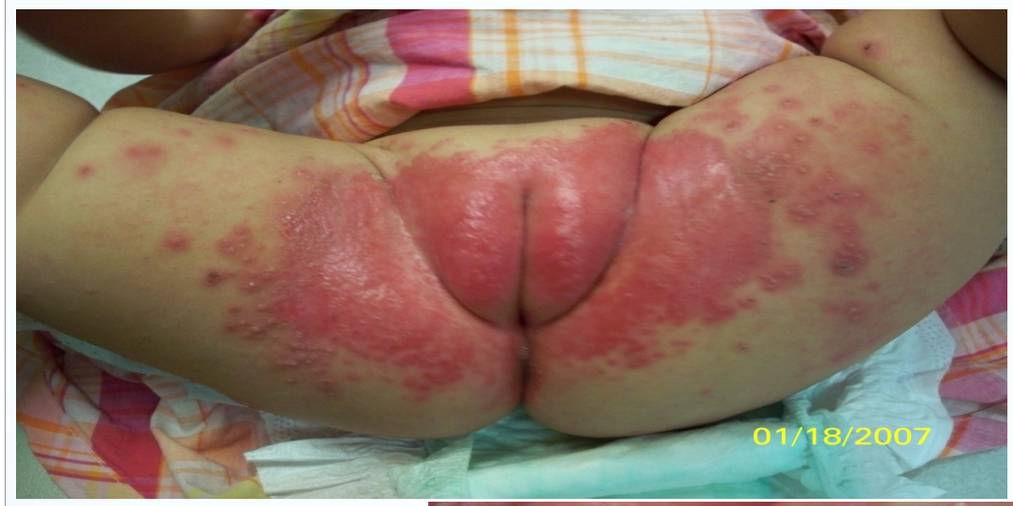
DD: Hives, EM, Slapped Cheek
DX: Another example of Slapped Cheek Disease rash on the extremities

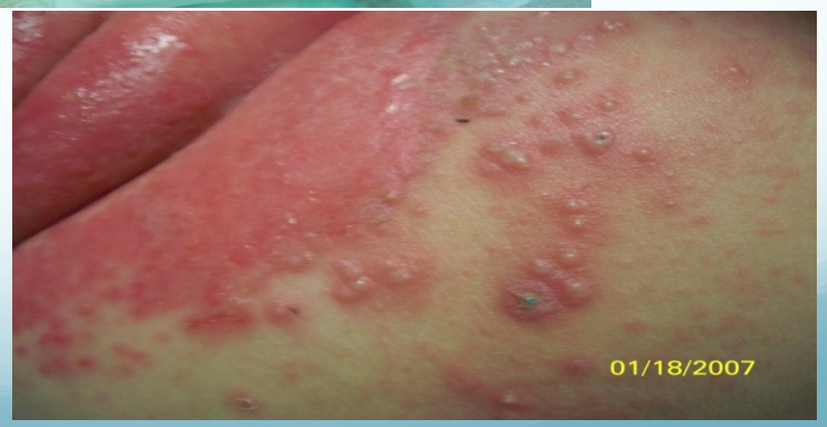
- Reticulated red lacy rash (usually on extremities) waxes and wanes and lasts up to 1-2 months.
- Fades and reoccurs with heat, vigorous exercise and trauma
- Warn caretakers about prolonged rash



DD: Impetigo, Slapped Check Disease, Seborrhea, Tinea
DX: Eczema

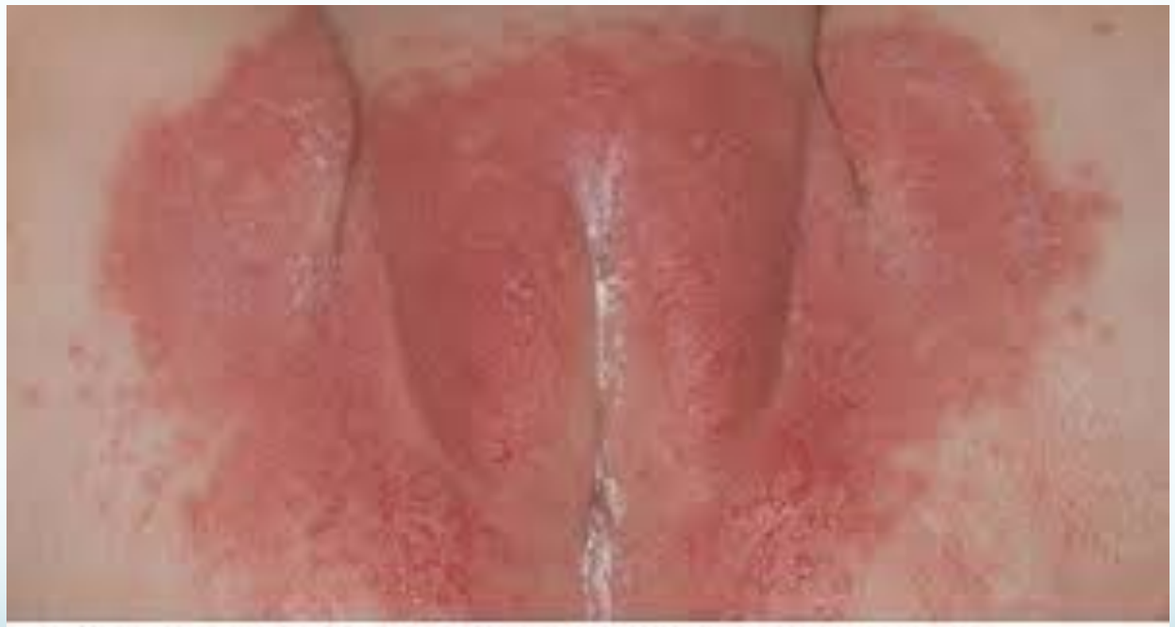
- **Eczema distribution in babies and young children is not generally in flexural creases**
- **Diffuse, with more localized dry red itchy thickened patches found anywhere on the body.**





DD: Yeast Diaper Dermatitis, Burn, Cellulitis
DX: Perianal Streptococcal Diaper Derm

- **Improved with Keflex (chosen due to recent amoxicillin use and good skin/soft tissue penetration).**
- **Some sparing of creases**

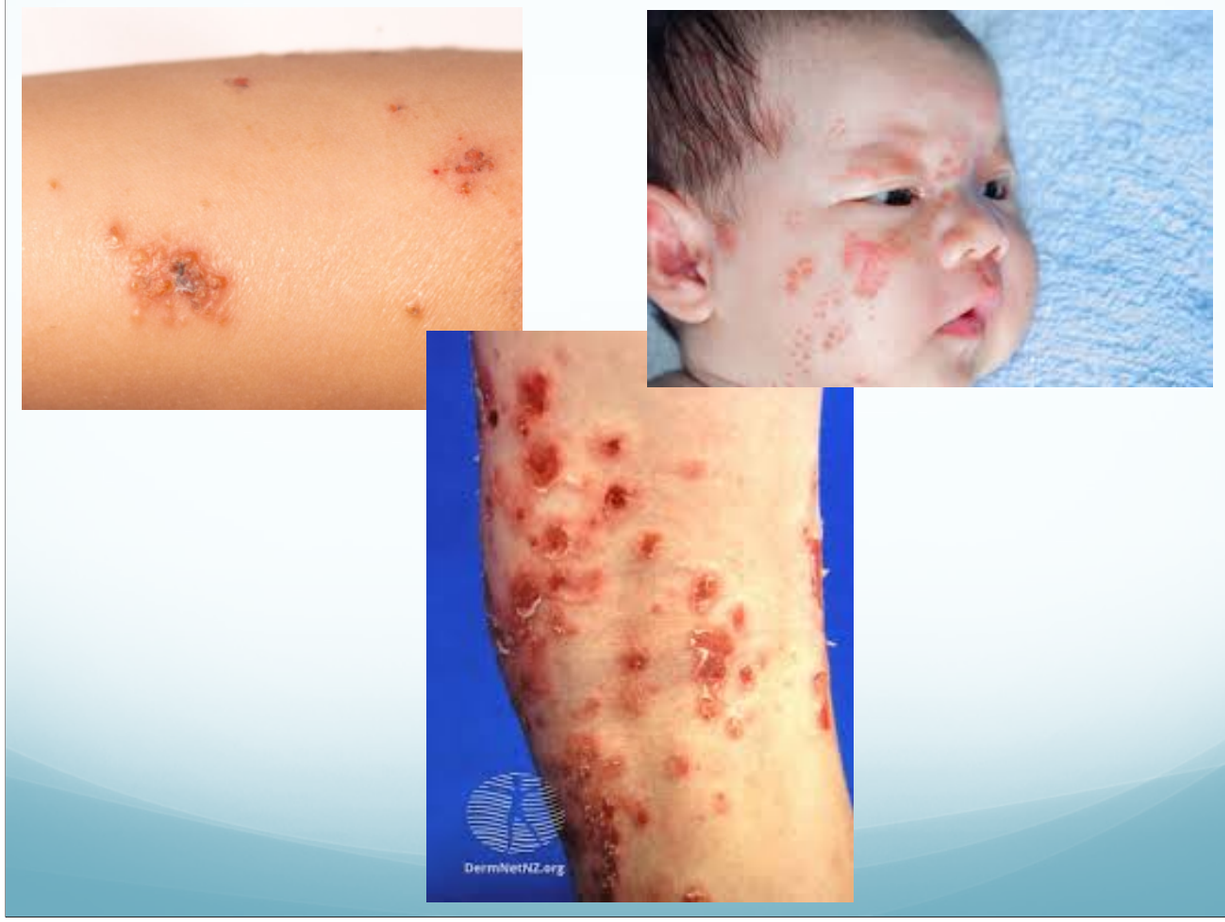


DX: Yeast Diaper Dermatitis.
Creases affected and there are satellite lesions
This is a moderately bad case of diaper dermatitis that can be treated with nystatin

But on rare occasions yeast diaper derm can get much worse…

DD: Bacterial or Contact Diaper Dermatitis
DX: Severe Yeast Diaper Dermatitis with dissemination to body

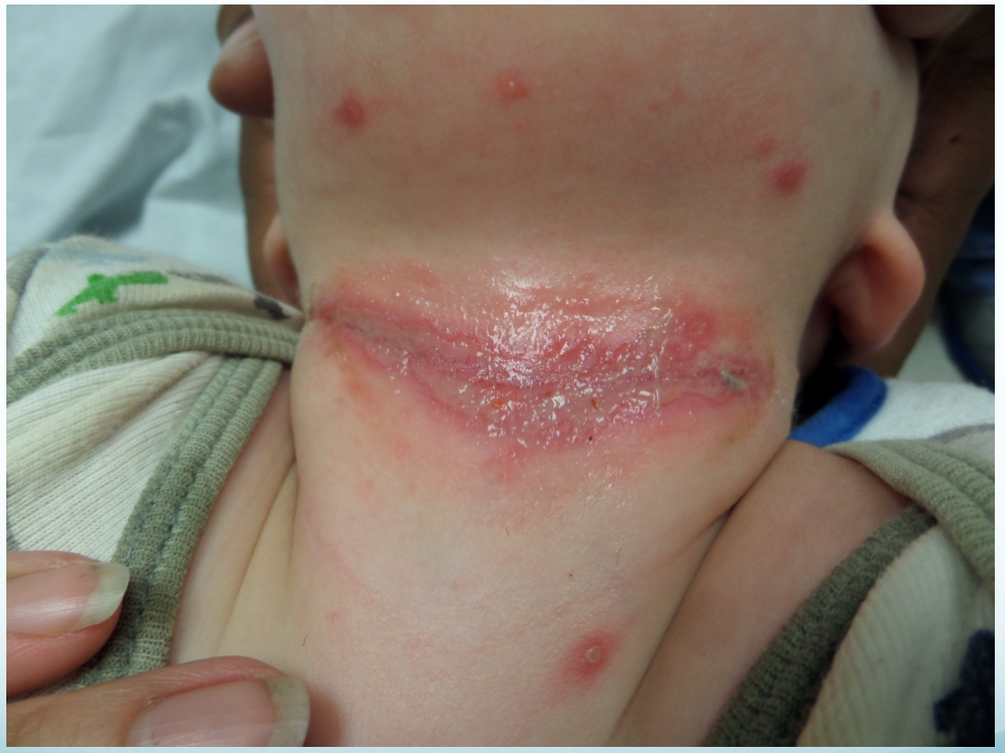
Treat with Diflucan, not topical antifungal



3 Different pictures of the same thing…What is it?

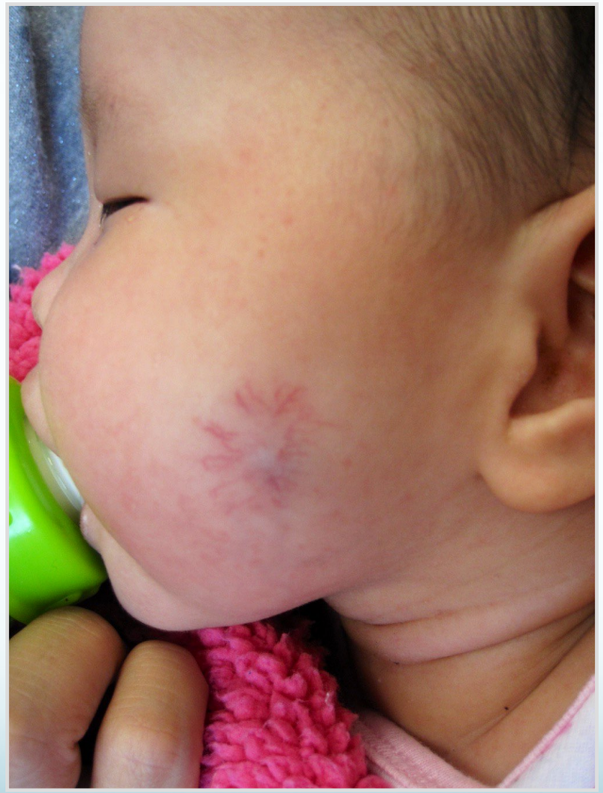
DX: Impetigo
Very common in our region
How would you treat these different cases?

- **Bacitracin?**
- **Mupiricin?**
- **Bleach baths?**
- **Antibiotics? Keflex best for strep, Septra has good MRSA and some strep coverage, Clindamicin which covers both well and is presently in the villages?**

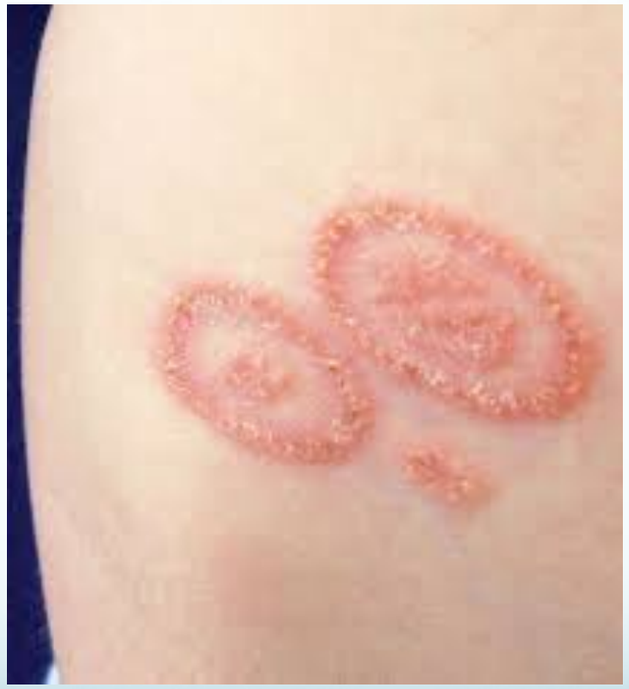


DX: Intertrigo

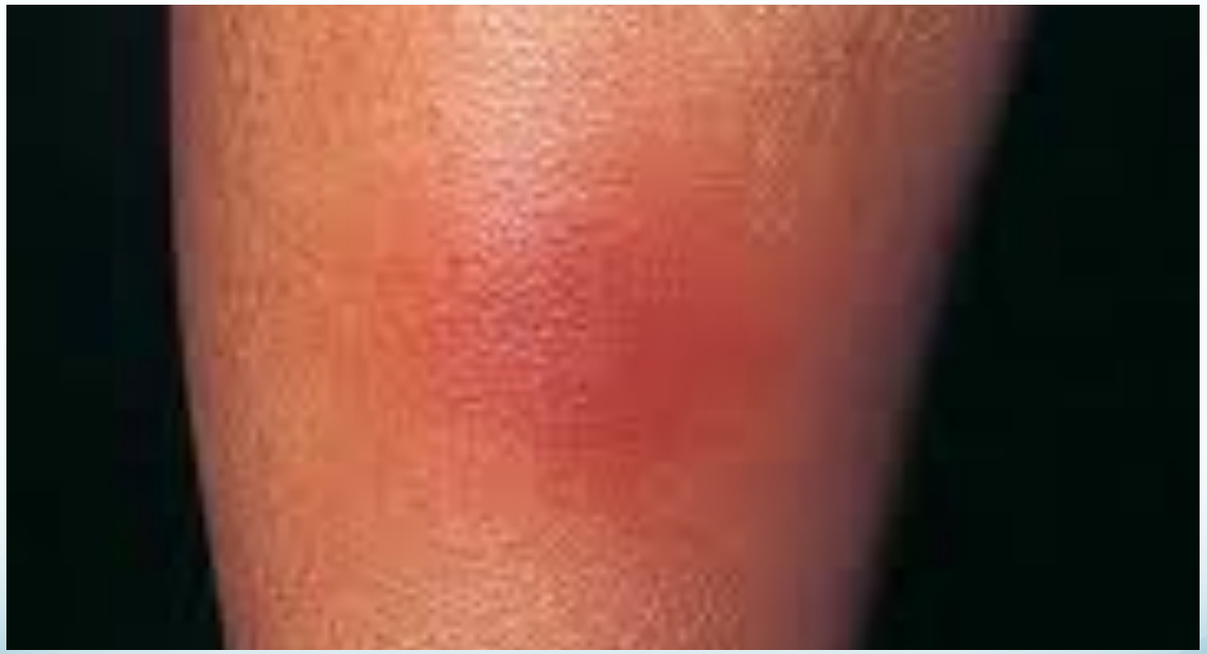
- **Keep Area Dry…GOOD LUCK!**
- **Rinse with water and blow dry on low warm blow dryer setting 4-6x/day**
- **Try fungal powder (instead of Nystatin Cream) - Miconazole Powder on formulary**
- **Consider Diflucan if all else fails...**



DX: Cheek Hemangioma
Admitted and started on propranolol and did well

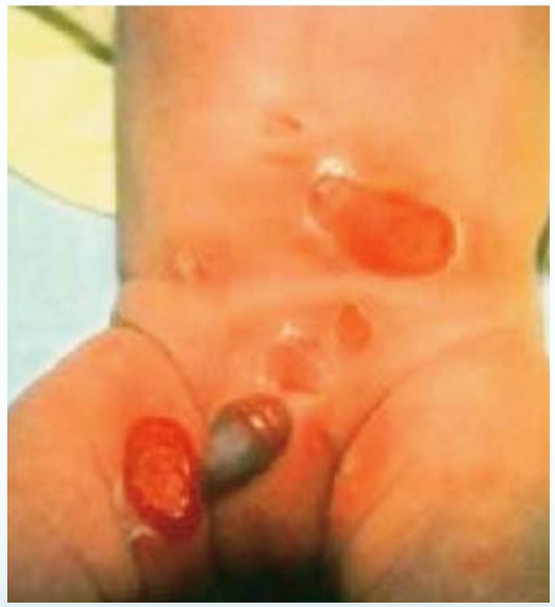


DD: Ringworm, Strep Infection, Eczema, granuloma annular
DX: Nummular Eczema

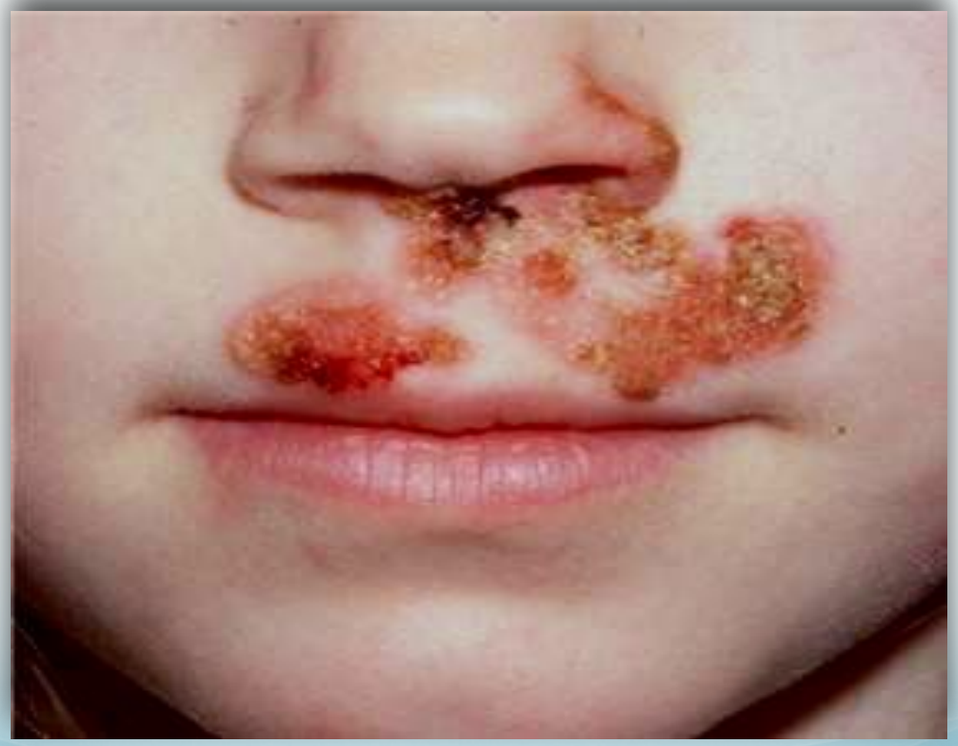


DD: Boil, Cellulitis, Erythema Nodosum
DX: Erythema Nodosum

- **Inflammation of fatty layer of skin**
- **Reddish, painful, tender lump most common on shins**
- **Nodules dime to a quarter can be mistaken for a boil**
- **Triggered by medications and infection, but often cause unknown**
- **Treat underlying cause if known**
- **Seeing this more with recent TB outbreaks**
- **Test for strep when seen as well**



DD: burn, ? ?
DX: Staph Scalded skin
Hospitalize and IV antibiotics

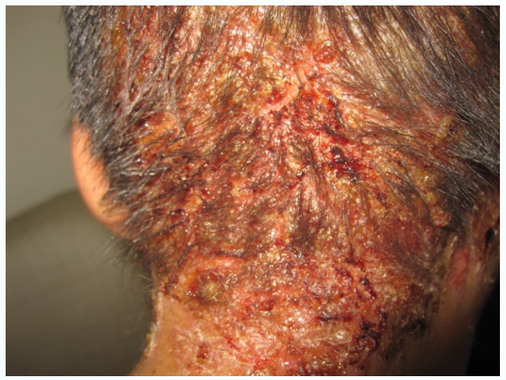


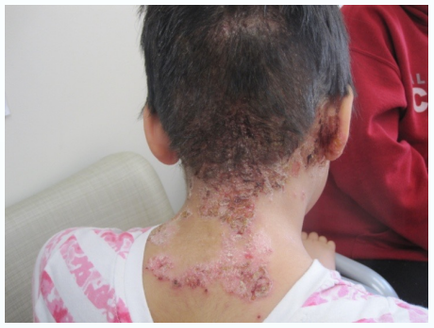
DX: Impetigo

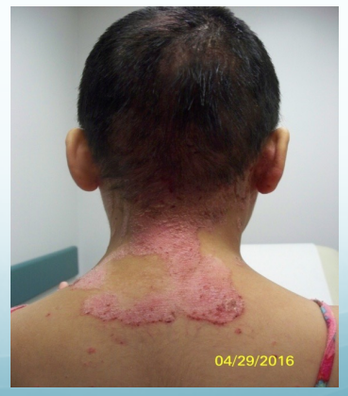
- **Mupirocin on lesions and in nostrils**
- **Bleach Baths**
- **Oral antibiotics if more extensive involvement**

DX Molluscum Contagiosum

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



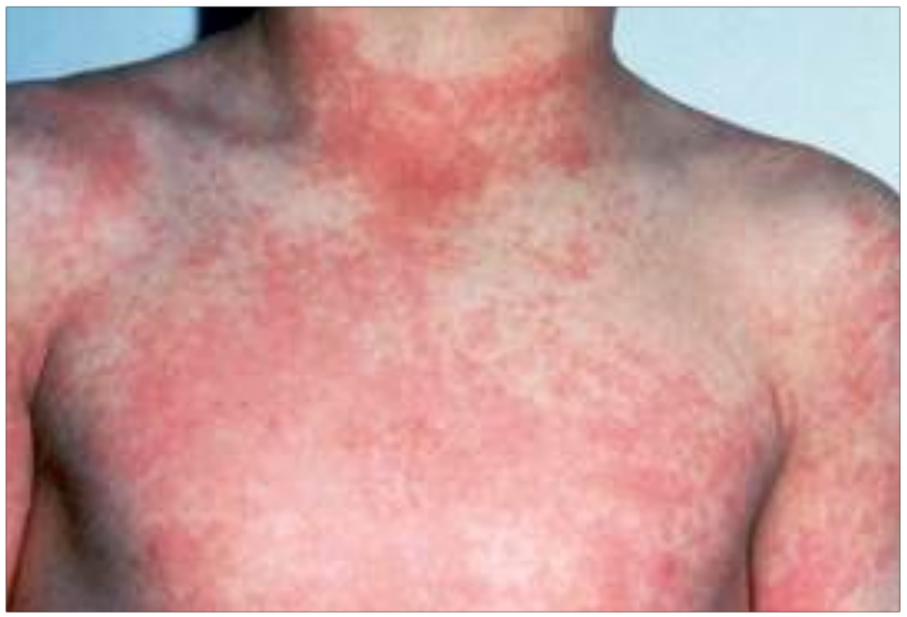




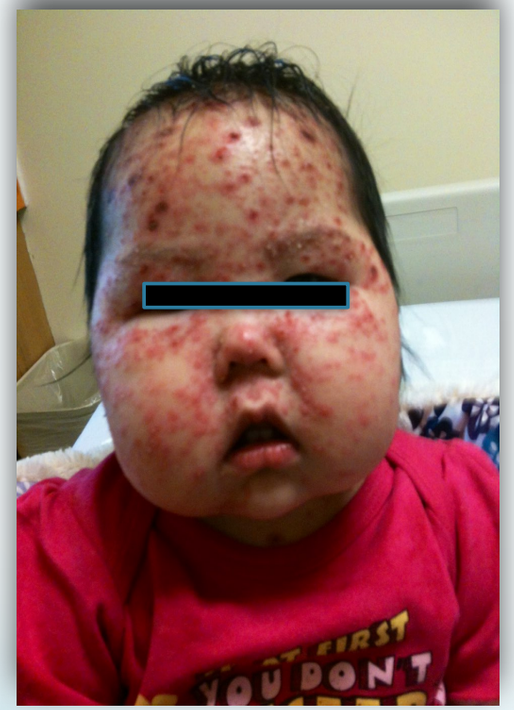
DD: Impetigo, Tinea Capitus, Contact Dermatitis, Allergic Drug Reaction
DX: Super Infected Psoriasis
Pt seen MANY times over two years. Treated with Neosporin, hydrocortisone, mupirocin, griseofulvin, ketoconazole shampoo, prednisone, and Augmentin and the rash never cleared.

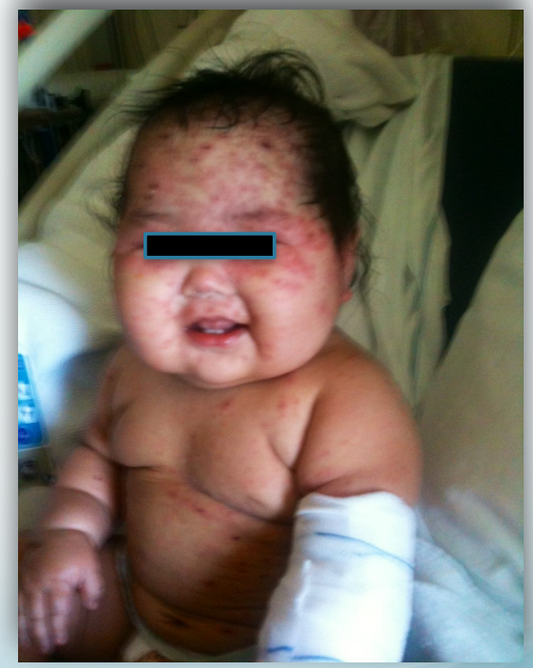
- **Top left photo is the day she was sent in by RMT and admitted for bleach and chlorhexadine sponge baths, oral clindamycin, oral Fluconazole and topical Mupirocin.**
- **Top right photo show rapid improvement over 4 days.**
- **Bottom photo is five days after discharge. With skin finally much clearer, it was possible to diagnose psoriasis and she is now followed by Gina Brown for this.**

Key Learning Point
She never received good MRSA coverage (Septra allergy label). To effectively diagnose this patient, the superinfection had to be appropriately treated so the underlying process could be better visualized, diagnosed and treated.



DD: Viral exanthem, eczema, EM
DX: Scarletina
- **Sandpaper rash**
- **Post strep rash**

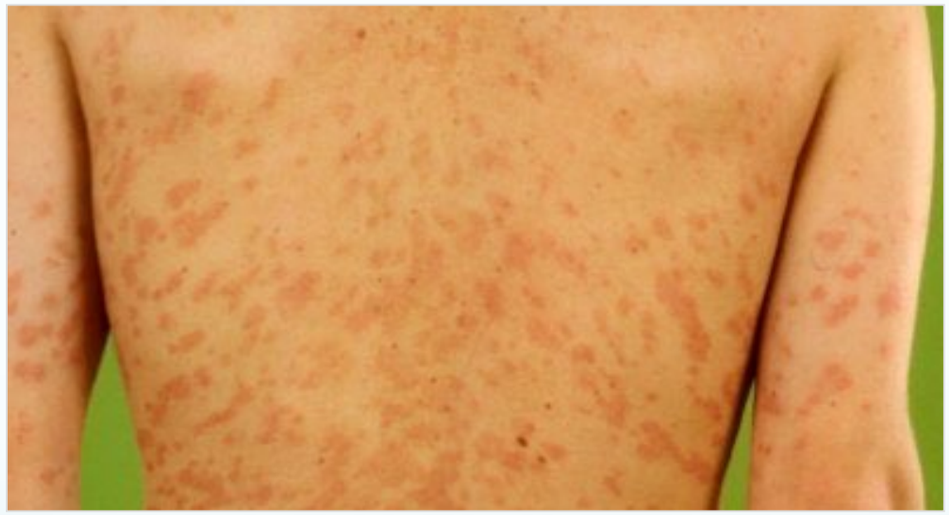


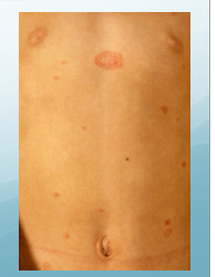


DX: Eczema Herpeticum
Admitted and given Acyclovir and did great
Must get eye consult if lesions close to eyes

Unusual Cool Stuff

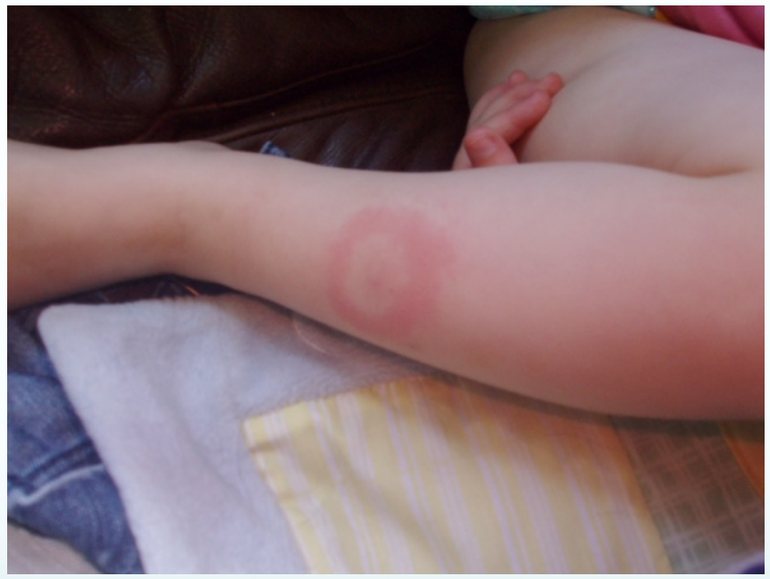
Things to make you think!



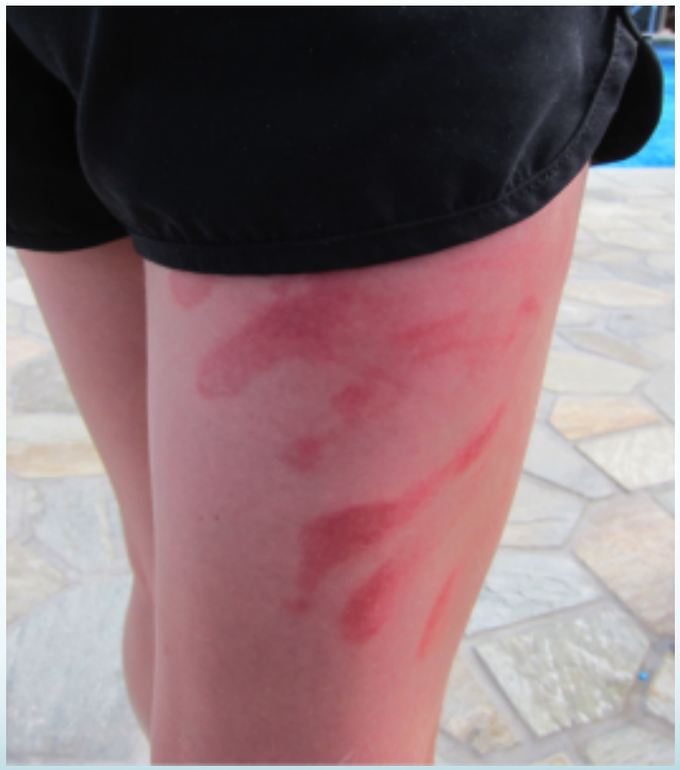


DD: viral rash, fungal infection
DX: Pityriasis Rosea

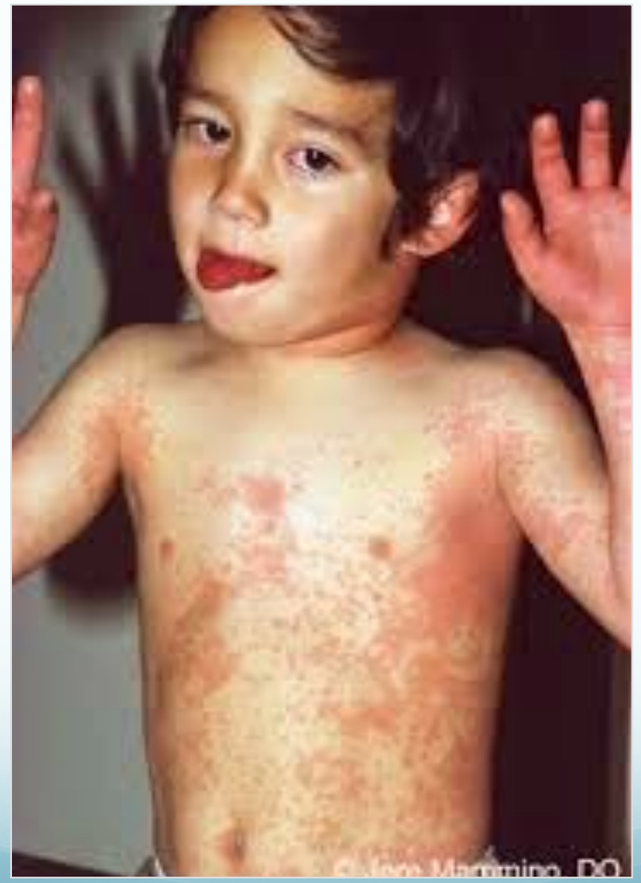
- **Proceeded by Herald Patch which is usually on the trunk and often missed**
- **Then develop a rash on back**
- **Oval pink scaly maculopapular rash on back following the lines of pastilla.**
- **Christmas tree pattern on back**



2 yo. Dad noticed rash on leg when getting off plane on return from vacation.
Had been in Tennessee 7-10 days prior. No known tick exposure.
Diagnosed as Lymes disease and started Amoxicillin without sending titres because of history and classic looking rash.
At nine years of age the patient was evaluated for another long lasting rash and convalescent titers for Lymes disease were positive.
Lyme disease is now in Alaska too.



DD: Poison Oak, Burn, Contact Dermatitis
DX: Phytophotodermatitis
Caused by contact with the photosensitizing compounds found in some plants and vegetables like parsnips (cow parsnip), citrus fruits (lime) and more.



No rash talk is complete without review of this rash and disease entity:
Hands and feet swelling
Mucous membranes
Non specific rash
Conjunctivitis

Kawasaki Review -
Generally under 5 years of age, seen in YK region, can lead to a coronary artery dilatations and aneurysms.
Need to start immunoglobulin and aspirin therapy early to prevent cardiac involvement.

- **Mucous membrane involvement**
- **Conjunctivitis**
- **LN involvement**
- **Swelling of hands and feet**
- **Intense irritability**
- **Rash (can be very non specific and variable)**

REMEMBER

- Pediatric rashes often look alike
- Viral rashes can look bad, but usually aren't
- If you think it is an amoxicillin allergy, it probably isn't
- Try to think horses not zebras, but always consider the worst in your differentials
- If you think it is chickenpox, it probably isn't
- A good HISTORY takes time... but is extremely important and worth getting
- Caretakers need reassurance, please give it to them
- Use your WIKI guidelines and protocols, RAVEN patient handouts and auto texts, Up to Date AND consult your fellow pediatricians and experienced partners with 'interesting' rashes