Eczema Triage and Management in the Emergency Department

Clinical Practice Guideline (CPG)

Approved by: Divisions of Pediatric, Dermatology, Division of Pediatric Emergency Medicine
Date(s) of Approval: December 2018
Date Created: December 2018
Date for Next Review: December 2021

cardinalglennon.com
Eczema Phenotype Algorithm to Inform Cardinal Glennon Emergency Department Triage

Consider the following questions:
1. Is the condition chronic?
2. Does the skin exam feature red, scaly, poorly circumscribed patches (see Atlas Figure 1)?
3. Is itch, rather than pain, the prominent feature?

If yes, proceed with Triage for Admission and Consult Dermatology prior to admission.

If no, ask:

- Are there lesions in the mouth, throat, on palms or soles? (see Atlas Figures 4)
  - Yes: Coxsackie
    - Order respiratory pathogen panel (RPP)
    - Supportive care
    - See Table 1 for outpatient eczema treatment plan
  - No: Are there lesions in the mouth, throat, on palms or soles? (see Atlas Figures 4)
    - Yes: Eczema Herpeticum
      - Obtain skin scraping for HSV PCR and culture; submit specimen on ice ASAP
      - Order urgent Ophthalmology consult for photophobia or scleral injection
      - Rx PO valacyclovir up to 20 mg/kg/dose (max 1 gm) TID x 5 days or PO acyclovir up to 10 mg/kg/dose QID x 5 days
      - See Table 1 for outpatient eczema treatment plan
    - No: Skin pain, acute worsening of eczema, pustules, boils, glazed appearance? (see Atlas Figures 2)
      - Yes: Group A Strep or Staph aureus
        - Swab for bacterial “wound” culture
        - Rx PO clindamycin 40 mg/kg/day divided every 6-8 hours (max 450-600 mg/dose)
        - See Table 1 for outpatient eczema treatment plan
      - No: Punched-out vesicles, erosions and/or hemorrhagic crusts?
        - Yes: Eczema
          - See Table 1 for outpatient eczema treatment plan
        - No: infection? (see Atlas)
          - Yes: See Table 1 for outpatient eczema treatment plan
          - No: Not Eczema (see Appendix)
            - Scabies
            - Tinea
            - Urticaria
            - Keratosis pilaris
            - Pityriasis alba
            - Ichthyosis vulgaris
            - Molluscum

**Background**

Eczema is the most common chronic pediatric skin disease, affecting an estimated 13% of children in the United States. It is characterized by onset in early childhood, chronic itch, erythema, and scale in a typical distribution. Eczema also features cutaneous dysbiosis with chronic Staph aureus colonization. Eczema can be complicated and mimicked by other skin conditions. These include irritant or allergic contact dermatitis, bacterial infection, viral infection (coxsackie, HSV, molluscum) and fungal infection. Appropriate treatment of acute worsening depends on recognizing and differentiating between an eczema flare and other complicating conditions.

**Definitions**

- **BSA:** body surface area
- **Macule:** circumscribed flat area of discoloration <1 cm, neither elevated nor depressed
- **Papule:** circumscribed, raised lesion <1 cm
- **Patch:** circumscribed area of discoloration >1 cm, neither elevated nor depressed
- **Plaque:** circumscribed, elevated lesion >1 cm
- **Vesicle:** circumscribed, serous fluid-filled lesion <1 cm
- **Pustule:** circumscribed lesion filled with purulent material
- **Erosion:** loss of superficial layers of epidermis
- **Hemorrhagic crust:** dried brown-red surface debris
- **Serous crust:** dried yellow surface debris

For more dermatological definitions, visit [http://missinglink.ucsf.edu/lm/DermatologyGlossary/index.html](http://missinglink.ucsf.edu/lm/DermatologyGlossary/index.html)
**Table 1:**
ED-Initiated Eczema Treatment and Follow-up, Based on Severity

Problems falling asleep or staying asleep because of itch?

<table>
<thead>
<tr>
<th>Problems falling asleep or staying asleep because of itch?</th>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mild</strong></td>
<td><strong>Moderate to Severe</strong></td>
<td></td>
</tr>
<tr>
<td>Topical Corticosteroid</td>
<td>Topical Corticosteroid</td>
<td></td>
</tr>
<tr>
<td>triamcinolone 0.025% ointment</td>
<td>triamcinolone 0.1% ointment OR mometasone 0.1% ointment (if triamcinolone failed in past)</td>
<td></td>
</tr>
<tr>
<td>QD x 7 days then QOD</td>
<td>QD x 7 days then QOD</td>
<td></td>
</tr>
<tr>
<td>≤30% BSA – Rx 30 gm</td>
<td>&lt;2 y/o - Rx 30 gm</td>
<td></td>
</tr>
<tr>
<td>≥30% BSA – Rx 80 gm</td>
<td>&gt;2 y/o - Rx 45 gm</td>
<td></td>
</tr>
<tr>
<td><strong>Follow-up</strong></td>
<td><strong>Follow-up</strong></td>
<td></td>
</tr>
<tr>
<td>PCP, within 2 months</td>
<td>Pediatric Dermatology, within 2 months</td>
<td></td>
</tr>
<tr>
<td>Forward After-Visit Summary to PCP</td>
<td>For follow-up &lt;2 mo, EPIC route to Lisa Jones</td>
<td></td>
</tr>
<tr>
<td><strong>Skin Care</strong></td>
<td><strong>Skin Care</strong></td>
<td></td>
</tr>
<tr>
<td>Review, edit and include .CGDERMINFLAMMATORY in discharge instructions</td>
<td>Review, edit and include .CGDERMINFLAMMATORY in discharge instructions</td>
<td></td>
</tr>
<tr>
<td>• Recommend plain petroleum jelly or mineral oil applied liberally to all areas of skin (not just affected areas) at least twice daily</td>
<td>• Recommend plain petroleum jelly or mineral oil applied liberally to all areas of skin (not just affected areas) at least twice daily</td>
<td></td>
</tr>
<tr>
<td>• Lukewarm bath or shower once or twice a day for 5-10 minutes followed immediately by patting skin dry and applying moisturizer to entire body</td>
<td>• Lukewarm bath or shower once or twice a day for 5-10 minutes followed immediately by patting skin dry and applying moisturizer to entire body</td>
<td></td>
</tr>
<tr>
<td><strong>Treatments to Avoid</strong></td>
<td><strong>Treatments to Avoid</strong></td>
<td></td>
</tr>
<tr>
<td>• Other over-the-counter products can cause contact dermatitis</td>
<td>• Other over-the-counter products can cause contact dermatitis</td>
<td></td>
</tr>
<tr>
<td>• Antibiotics without evidence of bacterial infection (fever, pain, leukocytosis)</td>
<td>• Antibiotics without evidence of bacterial infection (fever, pain, leukocytosis)</td>
<td></td>
</tr>
<tr>
<td>• Antihistamines provide itch relief for urticaria, and can cause idiosyncratic agitation</td>
<td>• Antihistamines provide itch relief for urticaria, and can cause idiosyncratic agitation</td>
<td></td>
</tr>
<tr>
<td>• Oral corticosteroids provide temporary relief, but rebound flare on discontinuation</td>
<td>• Oral corticosteroids provide temporary relief, but rebound flare on discontinuation</td>
<td></td>
</tr>
</tbody>
</table>
References


Atlas
Figure 1: Eczema Morphology

**Infants:** poorly circumscribed erythema, scaling, fine papules, excoriations, often involving face, extensor extremities, trunk, often sparing the folds and diaper area
Figure 1: Eczema Morphology

Children: accentuated at wrists, antecubital and popliteal fossae
Figure 1: Eczema Morphology

Worsening itch, erythema, excoriation, vesicles, purulence suggest secondary problems

- contact dermatitis
- viral, fungal or bacterial infection
Figure 2a: Bacterial Infection

Glazed appearance, skin tenderness accentuated in skin folds suggests group A Strep
Furuncles are most often caused by Staph aureus
Border accentuation may be subtle; scalp is the reservoir
Figure 3a: HSV

Grouped vesicles and punched-out erosions; predilection for periorbital and perioral areas

Consult Ophthalmology for nasal tip lesions, photophobia and scleral injection
Figure 3b: Eczema Herpeticum
Widespread skin involvement, pain, fever
Figure 4a: Coxsackie
Seasonal; vesicles or punched-out erosions often involving face, accentuated in eczematous sites
Figure 4b: Coxsackie

Palmar and plantar lesions may be prominent, subtle or absent
Appendix
Keratosis Pilaris

Fine, firm, follicular papules with associated background erythema on the cheeks and extensor surfaces of the arms and thighs
Icthyosis Vulgaris

Hyperlinear palms are pathognomonic
Icthyosis Vulgaris

Xerosis and coarse patterned scale, accentuated on the shins and sparing the popliteal fossae
Pityriasis Alba
Subtle, poorly circumscribed, hypopigmented patches with fine papular follicular accentuation, often on the face trunk and arms
Tinea

Sharply circumscribed patches, often with trailing edge scale; confirm with swab for fungal culture
Scabies
Pink papules with characteristic distribution

Infants often have lesions on palms and soles

Burrows are pathognomonic
Scabies
Pink papules with characteristic distribution

Older children and adults often have finger web space involvement.
Molluscum

Grouped dome-shaped, “pearly” papules with central umbilication

Typical

Inflamed, not impetiginized