Childhood Rashes
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No disclosures to report.

Objectives

- Identify common pediatric rashes and sources of irritation.
- Construct appropriate evaluation, treatment and management plans for pediatric rashes based on diagnostic.
- Educate parents on effective treatment methods and compliance with treatment protocol.

Erythema Toxicum Neonatorum

- Newborn
- Recognize diagnosis
- Don’t over-react
- Observe for spontaneous resolution

Courtesy of Richard Usatine, MD.
Infantile Hemangioma

- Benign vascular neoplasms
- Clinical course marked by early proliferation and followed by spontaneous involution.
  - ½ complete involution by age 5 years
  - Most clinically resolved by age 9 years
  - Most common tumors of infancy

Hemangioma

Courtesy of Richard Usatine, MD

Courtesy of John Browning, MD
**Infantile Hemangioma - Propranolol**
- Vast majority do not require any medical or surgical intervention
- **Propranolol** for severe infantile hemangiomas (20mg/5mL) Off Label!!!!!
- Start at 1 mg/kg/d divided tid
- In one week increase to 2 mg/kg/d
- Monitor for low BP and signs of hypoglycemia
- Some physicians will hospitalize the infant at first for monitoring

**NEJM 358:2649-2651 June 12, 2008**

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**Results with Propranolol**

![Image of a baby's face before and after Propranolol treatment.](image)

*Courtesy of John Browning, MD*

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**Infantile Acropustulosis**
- Newborn period
- More common 6-10 mo
- Lasts longer than transient neonatal pustular melanosis and is on palms & soles only
- Lasts for 7-10 days
- Eruption remits for 2-3 wks, then recurs

Infantile Acropustulosis

- Spontaneous resolution by 2-3 yrs of age
- Itching makes infants restless & fretful
- Benadryl may help.


Courtesy of Richard Usatine, MD

Infantile Acropustulosis - Tx

- Investigate for scabies & treat if suspicious
- If not scabies:
  - Treat symptoms with oral antihistamines
  - Pramoxine lotion or cream
  - Reassure that resolution will be spontaneous

A 2-year-old boy has 2 new pigmented spots on his back. They are slightly raised plaques - 6 and 7 mm in diameter with a uniform brown pigmentation. Stroking a lesion causes some swelling and erythema. The most likely diagnosis is:

A. Urticaria pigmentosum
B. Melanocytic nevi
C. Melanin incontinence
D. Ashy dermatosis
Cutaneous Mastocytosis - Tx

- Reassurance
- Observation if no symptoms
- Oral antihistamines
- Topical steroids
- Oral mast cell stabilizers – disodium cromoglycate

Courtesy of Richard Usatine, MD
Cutaneous Larva Migrans

- Creeping eruption
- In U.S., found mostly in Florida and Gulf Coast
- Children more frequently affected than adults

Courtesy of the Color Atlas of Family Medicine

Cutaneous Larva Migrans

- Hookworm infection
  - Hookworm (Ancylostoma braziliense) normally infects dogs and cats
  - Eggs of parasite in feces
  - Human steps on feces...infection can result
  - Africa, the Caribbean, southeast Asia, Central and South America

Courtesy of the Color Atlas of Family Medicine

Cutaneous Larva Migrans

- Usually starts on feet, buttock, legs or back
- Hookworm burrows along a haphazard track leaving a winding threadlike rash
- Intensely pruritic

Courtesy of the Color Atlas of Family Medicine
Cutaneous Larva Migrans

- **Oral thibendazole** - only FDA approved
  - 25 mg/kg Q12 hours for 2-5 days (max 3g/d)
- **Topical cream (15%)** compounded from 500mg tablets in a water-soluble base
  - Good choice for children who cannot take tabs
  - Applied topically bid to tid for 5 days to the larval track and 2 to 3 cm above lesions
  - Cure rates of 75% to 89% with the oral form and 96% to 98% with topical treatment

- **Ivermectin** (Stromectol) lacks FDA indication, but has been well studied.
  - Single dose 0.2 mg/kg (12–24 mg)
  - Cure rates ~100%
  - No adverse events in series of 6 studies
- **Albendazole**, prescribed for >25 years
  - Lacks FDA indication
  - 400 to 800 mg/d for 3 to 5 days
  - Cure rates >92%
  - Cryotherapy is harmful

Hand Foot and Mouth Diseases

- **<10 y/o**
- Incubation of 3-6 days
  - 12-36 hour prodrome low-grade fever, malaise, cough
  - Anorexia, abdominal pain, sore mouth
  - Group A coxsackie viruses/enterovirus
  - 2-3 days resolves
  - New worse form

Courtesy of Richard Usatine, MD
Hand Foot and Mouth Disease
Coxsackievirus A16

Fifth Disease (Erythema infectiosum)
• Human parvovirus B19
• Late winter or early spring
• Self-limited illness
• Slapped cheek appearance
Fifth Disease (Erythema infectiosum)

- Within 1-4 days of the malar rash
- Erythematous macular-to-morbilliform eruption on extremities.
- May involve palms/soles.
- Pruritus rare

Courtesy of Richard Usatine, MD

Acrodermatitis Enteropathica – zinc deficiency
Fixed drug eruption

- Usually secondary to an antibiotic such as trimethoprim/sulfamethoxazole, amoxicillin or a tetracycline
- Recurs in the same location each time the medications taken
Gianotti-Crosti Syndrome

- Distinct exanthem after infection or immunization
- Sudden rash onset
- Face, buttocks, and extremity extensor areas
- Associated lymphadenopathy

Gianotti-Crosti Syndrome

- Appear healthy
- Rash has sudden onset
  - May be associated with an acute infectious illness or immunization
  - Face, buttocks, and extremity extensor area
    - Face may be only area of involvement
  - Present for 2 to 4 weeks – up to 4 months
  - Symmetric and mildly pruritic
  - Trunk is strikingly spared

Gianotti-Crosti Syndrome

- Local type IV hypersensitivity reaction to the infectious antigen within the dermis
- More common among children with atopic dermatitis
- Hepatosplenomegaly and axillary or inguinal adenopathy are inconsistent findings
### Gianotti-Crosti Syndrome

<table>
<thead>
<tr>
<th>Viral Infections</th>
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<th>Immunizations</th>
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<tbody>
<tr>
<td>Hepatitis A, B, and C</td>
<td>Herpes virus 6</td>
<td>Polio</td>
</tr>
<tr>
<td>Rotavirus</td>
<td>Echovirus</td>
<td>Diphtheria</td>
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<td>Epstein-Barr virus</td>
<td>Molluscum</td>
<td>Influenza</td>
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<td>Rubella virus</td>
<td>Group A streptococci</td>
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<td>Cytomegalovirus</td>
<td>Mycobacterium avium</td>
<td>Measles</td>
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<tr>
<td>Coxsackie viruses A16, B4, and B5</td>
<td>HIV-associated bacterial infections</td>
<td>Smallpox</td>
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<td>Meningococcemia</td>
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<tr>
<td>Parvovirus B19</td>
<td>Paravaccinia</td>
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</tbody>
</table>
Gianotti-Crosti Syndrome
- Lab unhelpful
- Skin biopsy nonspecific
- Ruling out other diseases
- Benign self-limited condition
- No treatment
- Systemic antihistamines for pruritus
- Rash appears after infectious period
- May go to daycare or school

Hypomelanosis of Ito
- Congenital hypomelanosis as follows
  - Blaschko’s lines—lines of embryonic development
  - There are swirls present
  - Lines and swirls often involved the extremities
  - Other abnormalities may be present
Lichen Striatus

- Linear papular eruption in children that often extends down an extremity
- It resolves spontaneously
- It may take years to resolve

Courtesy of Richard Usatine, MD
Linear Epidermal Nevus

- Most are benign and only cosmetic
- If part of a epidermal nevus syndrome then there are other organ systems involved
- Consider workup if there are signs of neurologic abnormalities

Courtesy of Richard Usatine, MD
Summary of Rashes

- Urticaria pigmentosa
- Acrodermatitis enteropathica
- Drug eruptions
- Gianotti-Crosti syndrome
- Impetigo
- Hypomelanosis of Ito
- Infantile acropustulosis
- Erythema toxicum neonatorum
- Nevus sebaceous
- Linear epidermal nevus
- Atopic dermatitis
- Erythema infectiosum
- Fixed drug eruption
- Scabies
- Lichen striatus
- Cutaneous larva migrans