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Puzzling Pediatric Dermatology Cases

Michael Decker, MD
Children's Hospital of UPMC, Pittsburgh, PA

Disclosures:

Speaker has no disclosures and there are no conflicts of interest.

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Michael J. Decker, M.D.
Assistant Professor of Pediatrics
Paul C. Gaffney Diagnostic Service
Children's Hospital of Pittsburgh of UPMC

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- Dr. Michael Decker has no conflict of interest, financial agreement, or working affiliation with any group or organization.

Objectives

- Be able to properly describe pediatric dermatologic lesions
- Recognize and treat some of the more common but often misdiagnosed pediatric dermatologic conditions
- Understand how to evaluate and treat hemangiomas

"THE GOOD NEWS IS THAT NEW MEDICINE CLEARED UP THE SPOTS, BUT..."

Dermatology Terms – Primary Skin Lesions

- **Macule** – A macule is an area of color change less than 1.5 cm in diameter. The surface is smooth.
- **Patch** – A patch refers to a large area of color change, with smooth surface.
- **Papule** – Papules are small palpable lesions. The usual definition is that they are less than 0.5 cm diameter, although some authors allow up to 1.5 cm. They are usually visibly raised above the skin surface, and may be solitary or multiple.
  - Papules may be sessile, pedunculated, filiform, or verrucous

Dermatology Terms – Primary Skin Lesions

- **Plaque** – a palpable flat lesion greater than 0.5 cm diameter. Most plaques are elevated, but a plaque can also be a thickened area without being visibly raised above the skin surface.
- **Nodule** – an enlargement of a papule in three dimensions (height, width, length).
- **Vesicle** – are small blisters less than 0.5 cm diameter. They are fluid-filled papules, and may be single or multiple.
- **Pustule** – a purulent vesicle. It is filled with neutrophils, and may be white or yellow. Not all pustules are infected.

Dermatology Terms – Primary Skin Lesions

- **Bulla** – a large fluid-filled blister. It may be a single compartment or multiloculated.
- **Wheal** – an edematous papule or plaque caused by swelling in the dermis. Whealing often indicates urticaria.
- **Purpura** – a bleeding into the skin. This may be a petechiae (small red or brown spots), or an ecchymoses (bruises).
- **Telangiectasia** – the name given to prominent cutaneous blood vessels.

Dermatology Terms – Secondary Skin Lesions

- **Scaling** – an increase in the dead cells on the surface of the skin (stratum corneum). The scale can be psoriatic-type (large white or silver flakes), pityriasis-type (branny powdery scale), or lichenoid (tightly adherent to skin surface)>
- **Lichenification** – caused by chronic rubbing which results in palpably thickened skin with increased skin markings and lichenoid scale. It occurs in chronic eczema, Atopic dermatitis or lichen simplex.
- **Exfoliation** – the stratum corneum peeling off, usually occurring after acute inflammation.

Dermatology Terms – Secondary Skin Lesions

- **Fissure** – a thin crack within epidermis or epithelium, and is due to excessive dryness.
- **Ulcer** – full thickness loss of epidermis or epithelium. It may be covered with a dark-colored crust called an eschar.
- **Erythroderma** – a term used to indicate red skin over the entire body.

Dermatology Terms – Secondary Skin Lesions

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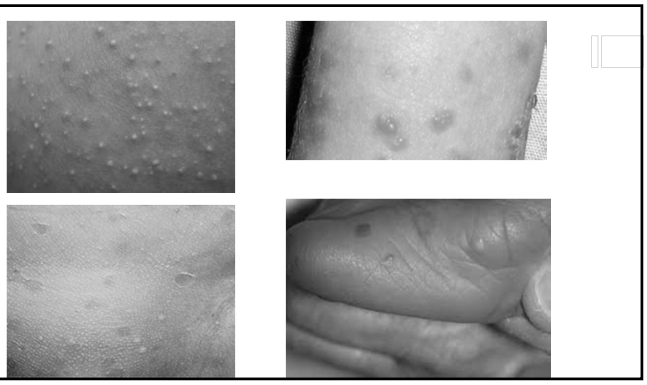
Dermatology Terms – Secondary Skin Lesions

- **Crusting** – occurs when plasma exudes through an eroded epidermis. It is rough on the surface and is yellow or brown in color. Bloody crust appears red, purple or black.
- **Excoriation** – a scratch mark. It may be a linear erosion or a picked scratch. Excoriation may occur in the absence of a primary dermatosis.
- **Erosion** – caused by loss of the surface of a skin lesion, it is a shallow moist or crusted lesion.

CASE #1

- Called to the delivery room to see a baby with a rash
- Term baby
- Uncomplicated pregnancy
- ROM x 6 hrs. Vaginal delivery
- Apgars 9 and 10
- Mother with h/o HSV 5 years ago – no recent outbreaks
- Serologies neg

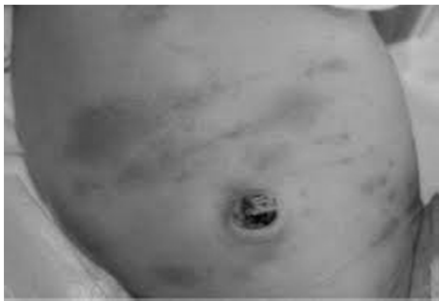


Neonatal Pustular Melanosis

- Self limited. Etiology unknown
- 1-2 mm vesiculopustules or ruptured pustules
- Resolve in 24-48 hrs leaving pigmented macules with a collarette of scale
- Forehead, neck, lower back and legs
- Hyperpigmentation fades over 3 weeks to 3 mos
- Gram stain – Neutrophils
- Differential includes E. toxicum, staph folliculitis and Neonatal HSV

CASE #2

- 4 Day old infant in office for hospital follow up
- Diffuse rash present for about 24- 36 hrs
- Parents endorse rash is spreading
- Mother placed on penicillin for presumed strep throat on the day after delivery
- Infant is well
- Breast feeding

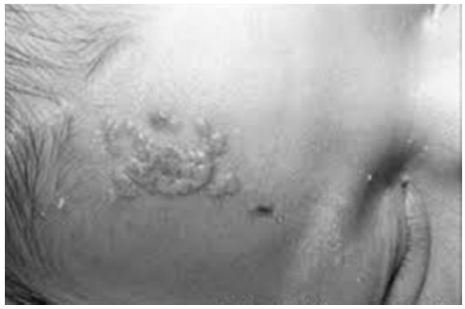


Erythema Toxicum

- BENIGN, SELF LIMITED,
- Etiolgy unknown
- 50% of term infants
- Usually starts within 24-48 hrs of life – can appear as late as day 10
- Central papule or pustule with intense surrounding erythema
- Face, torso and extremities
- Palms and soles are spared
- Case reports of lesions isolated to the diaper area
- Gram stain – Eosinophils. 20 % with peripheral eosinophilia
- Spontaneous resolution in 5-7 days

CASE #3

- 1 week old infant presents for eval of rash on the forehead
- Started as 1-2 lesions but more have developed over the past 24 hrs
- Infant otherwise doing well



HSV

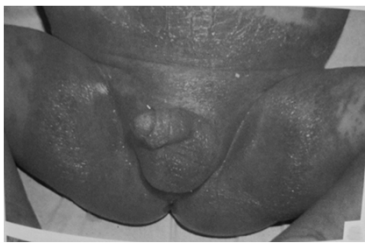
- SEM – SKIN, EYE, MOUTH
  - Sites of trauma – scalp electrode, Forceps
  - Incubation period 4-21 days
  - Symptomatic in 6-21 days. 30-40% with symptoms in first week
  - Start as papule – ulcerate over 24-48 hrs
  - Small 1-3 mm with thin rim of erythema
  - 17% with no skin lesions
  - Keratoconjunctivitis or oral lesions

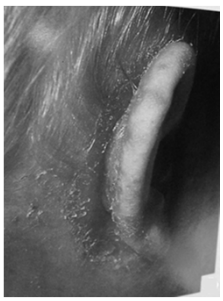
HSV - continued

- SEM-continued
  - If treated NO mortality
  - Untreated 70 % will progress to CNS disease or systemic infection
  - Culture the lesion – Scraping
  - Viral culture and PCR
  - Role of DFA
  - Other cultures
  - Treatment – Acyclovir 60 mgs/kg TID for 14 days
- CNS disease
- Systemic infection

Case # 4

- 2 mo old presents for WCC
- Parents concerned about a diaper rash that won't go away
- Parents have tried Aquaphor, Desitin, Vitamin E and Triple antibiotic cream
- Not bothersome
- Infant well appearing



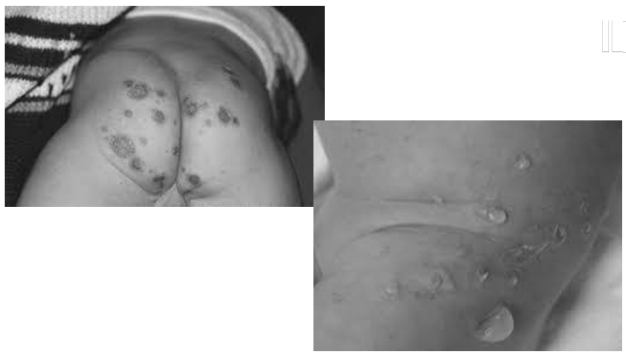


Seborrheic Diaper Dermatitis

- Salmon colored Greasy lesions with a yellow scale - involves intertriginous areas
- No satellite lesions
- Typically associated with involvement of face, scalp and postauricular areas
- Link with Malessesia Furfur
- Treated conservatively
- Can use Antifungals or low potency steroid creams

CASE # 5

- 15 mo old boy with underlying h/o eczema presents with diffuse rash
- Parents treating eczema with moisturizers
- Rash started as “red dots” but quickly became small pimples
- Child with temp – 38.3, tired and seems uncomfortable
- Parents noted a blister behind knee at bedtime
- Woke up with widespread rash

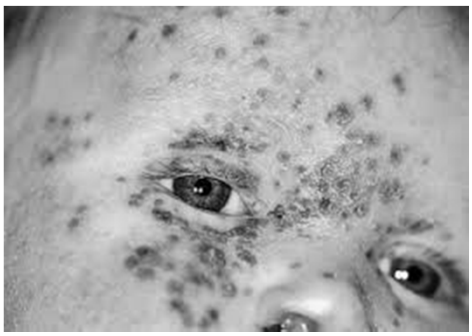


Staph Impetigo

- More common than Strep
- Superficial infection of the epidermis
- Initial lesions rapidly develop into small pustules or large flaccid bullae
- When rupture they leave a shallow erythematous base with a superficial peeling rim of skin
- Can see smaller satellite lesions
- Treat underlying condition

CASE #6

- 18 mo old child with h/o poorly controlled eczema presenting with fever, malaise and painful rash
- Child with Temp – 103.5
- Rash is present on forehead and has spread around the eye

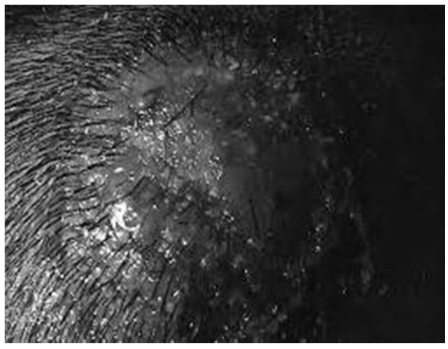


Eczema Herpeticum

- Lesions appear in crops and typically involve areas of previously affected skin
- Pustules rupture and crust over the course of several days
- Crops of lesions appear over 7-10 days
- Lesions evolve slower than classic varicella
- Systemic symptoms last longer than varicella

CASE # 7

- 10 yo boy presents with a pustular, draining lesion on his scalp
- Plays football and had been complaining his helmet was too tight
- Lesion getting worse despite 2 days of keflex

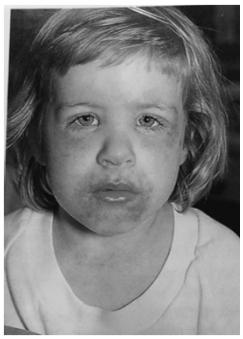


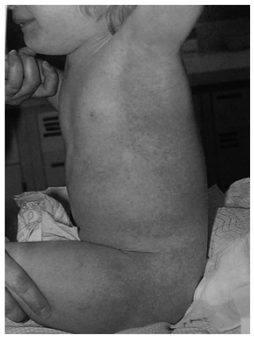
Tinea Capitus With Kerion Formation

- Inflammatory process – NOT infectious
- Treat underlying fungal infection
- Steroids may be needed
- No need for antibiotics
- Can result in scarring and permanent hair loss

CASE # 8

- 6 yo girl presents with fever, malaise and a sandpaper rash which is accentuated in the skin folds
- + ill contacts at school
- Temp -102.5. Child appears moderately ill
- Sandpaper rash with perioral and periorbital pallor
- Skin around mouth is dry and fissuring
- Skin is tender



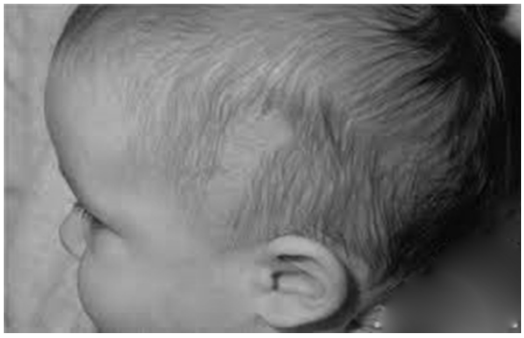


Staph Scarlet Fever

- Initially rash clinically indistinguishable from strep
- Lack oropharyngeal findings
- Tender skin
- Skin cracks and fissures – perioral, periorbital and in creases
- Skin sheds in flakes
- Oral antibiotics are sufficient

CASE #9

- 1 Week old infant presents for weight check
- Doing well but mother concerned about area on left side of scalp where there is no hair
- Worried child will have a bald spot

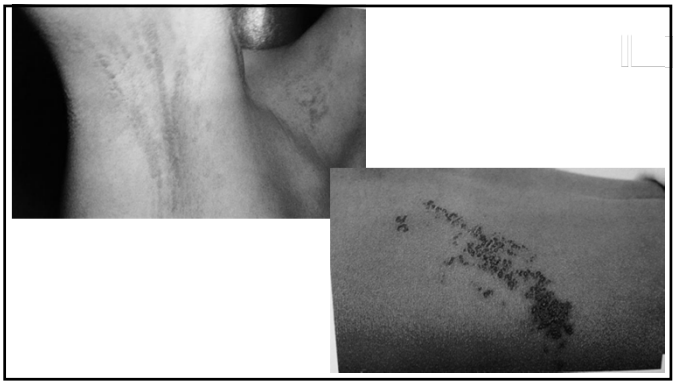


Nevus Sebaceous of Jadassohn

- Skin colored or yellowish plaque
- Round or linear
- Usually on scalp, face or neck
- Grow with child
- At puberty can take on a raised, nodular or “warty” appearance
- 10-15 % malignant transformation – Basal Cell carcinoma

CASE #10

- 6 mo old presents for WCC
- Parents concerned about “marks” under arm that seem to be growing
- Sometimes seems bothersome when child is picked up

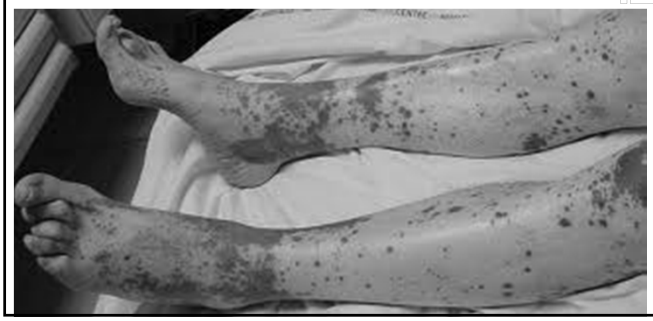


Epidermal Nevus

- Fall into category of hamartomatous nevi
- Can be composed of epidermal structures, apocrine glands, fibroblasts and blood vessels
- Epidermal nevi
  - Can be present at birth/may develop in early child hood
  - Complex or multiple epidermal nevi associated with seizures, cognitive deficits, ocular and skeletal abnormalities
  - Increased risk if involves midface or other midline location

CASE #11

- 8 yo girl presents with several days of fever, headache and decreased appetite.
- She had 24 hrs of an urticarial rash 2 days ago
- 2 days of diffuse, crampy abdominal pain and 24 hrs of rash on legs and swelling of ankles
- Difficulty walking. Hands and feet are swollen

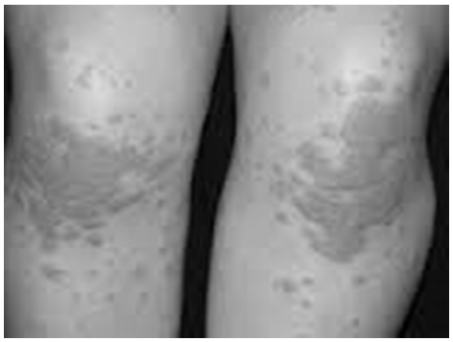


Henoch-Schonlein Purpura

- Vasculitis involving small non-muscular vessels
- Nonspecific prodromal symptoms
- Followed by GI complaints, rash and joint symptoms
- Erythematous macules, urticarial papules, petechaie and palpable purpura. Initial rash may be generalized urticaria
- Purpura symmetrically distributed below the waist. Can involve extensor aspect of arms, cheeks and ears
- Periarticular swelling
- 25% develop nephritis
- Rash can wax and wane over 1-8 weeks

CASE #12

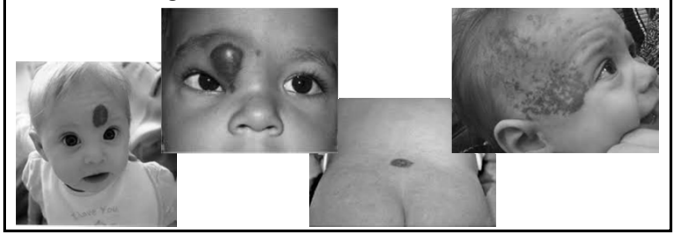
- 2-1/2 yo child presents with 2 days of fever, diarrhea and mild URI symptoms – all of which seem to be improving
- Child developed a pinkish-red bumpy rash on cheeks and legs
- Rash is spreading



Gianotti-Crosti

- Self limited exanthem
- Symmetric asymptomatic rash that evolves over several days
- 1-10 mm papules or papulovesicles over checks and extensor surfaces of extremities
- Younger children widespread lesions. Older children usually face OR extremities
- Involvement of trunk unusual
- Lesions can coalesce to form plaques
- Lesions can acquire a smooth or polished appearance
- Fade over 10 days to several weeks

Hemangiomas



Hemangiomas

- Natural history
  - Spontaneous regression
  - 50 % by age 7. 90 % by age 9
  - Non-scarring
  - 40 % may leave behind redundant skin and telangectasias

Hemangiomas

- When to intervene
  - Multiple
  - Midline
  - Involve vital structures – periorbital, airway, tip of nose
  - Ulceration – rapidly growing

Lumbar Syndrome

- L – Lower body hemangiomas
- U – Urogenital abnormalities/Ulceration
- M – Myelopathy
- B – Bony deformities
- A – Anorectal anomalies/Arterial anomalies
- R – Renal anomalies

- Consider in children with segmental hemangiomas over lower back or near perineum

Phaces Syndrome

- P – posterior fossa malformations
- H – Hemangiomas
- A – Arterial anomalies
- C – Cardiac defects
- E – Eye anomalies
- S – Sternal clefts

- Consider in children with large plaque-like facial hemangiomas

Hemangiomas

- Treatment
  - Observe
  - Topical therapy - Timolol
  - Propranolol
    - Monitor MBG's
    - Blood pressure

Questions?