

## Do I Detect Child Abuse or Not? Dermatological Conditions Unrelated to Abuse

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Maine AAP May Conference  
Bar Harbor  
9 May 2014

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## Outline

### Bruising- differential

Inside problems  
LS&A  
Morphea  
Mongolian Spots  
Fixed Drug Eruption

Outside problems  
Sock line dermatitis  
Photophyodermatitis

### Blisters & Burns

Inside problems  
Epidermolysis Bullosa  
Mastocytosis  
Zinc Deficiency

Outside problems  
Bleach Burns  
Salt Ice challenge  
Krokodil

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## Lichen Sclerosis & Atrophicus (LS&A)

Rare  
Cause: Unknown  
Diagnostic delay  
Can raise concerns for abuse  
Presentation: Prepubertal  
females, predilection for GU  
area, atrophic plaques,  
hemorrhagic  
Course: Chronic  
Treatment: Potent top Steroids



Dan Med J. 2012;59(5):A4424

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## Morphea

- Uncommon (incidence 0.2%)
- Pathophysiology: Inflammatory, sclerosing
- Cause: Unknown
- Course: Plaque or linear, relentless until "burned out"
- Treatment: MTX + Steroids



© Elsevier. Palter & Mancini: Hurwitz Clinical Pediatric Dermatology 3e - www.hurwitz3e.com

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## Fixed Drug Eruption

One or more annular or oval erythematous patches  
Result of systemic exposure to drug  
Usually resolves with pigmentation  
May recur at same site with re-exposure to the drug  
Repeated exposure to the offending drug may cause new lesions (in addition the older hyperpigmented lesion)



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## Mongolian Spots

Irregular, blue-gray patches  
Often on buttocks, lower back  
Represent dermal Melanin  
Most fade by 5y  
Common- African-Americans, Native Americans, Asians, and Latinos  
Can be assoc. w/ GM1 gangliosidosis, Hunter syndrome



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## Sock-Line Bands

Erythematous, linear,  
partially or completely  
circumferential plaques  
Located on LE above ankle  
Transition to palpable, scar-  
line, skin-colored,  
hyperpigmented plaques  
Usually fades over 5m- 5yrs



Pediatric Dermatology  
Volume 28, Issue 1, pages 83-84, 28 JAN 2011 DOI: 10.1111/j.1525-1470.2010.01366.x  
<http://onlinelibrary.wiley.com/doi/10.1111/j.1525-1470.2010.01366.x/fulltext>

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## Phytophotodermatitis

Hyperpigmentation when  
in contact with  
psoralens (lime some  
orange peels) & light  
Can be mistaken abuse  
Fades over time



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## Epidermolysis Bullosa

Very rare  
Genetic disorders  
Various inheritance  
Skin/muc mem blistering  
With minor shearing forces



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## Mastocytosis

Pathophysiology: Clonal

Cause: Unknown

Course: Typically disappears in Adolescence

Treatment: Antihistamines, avoid mast cell degranulators, consider epi pen



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## Zinc Deficiency

Rare

Acquired-Zn Def

Premies- insufficient input

Genetic -acrodermatitis enteropathica

Periorificial erosions

Treatment- Zinc



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## Bleach Burns

Alkali skin injury

Skin proteins denature

Hair can be consumed in ~ 8m, nails in ~ 6h

Red-brown discoloration initially followed by post-inflammatory hyperpigmentation



Rat studies

Washing off within 1m caused epidermal but not dermal injury. Delay in washing led to epidermal and dermal injury (partial thickness burns)

Telmon, N, et. Al. Concentrated Bleach Burns in a Child. *J Forensic Sci* (2002) 47 (5)

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# Bleach Burns

Standard (5.25%) concentration (pH 11-12)

Burns primarily on lower body

Child with atopic dermatitis & frequent infections

Treated with antibiotics and bleach baths

Lang C and Cox M. Child Abuse and Neglect. 2013. 37:485-8

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# Inhalant Huffing

Intentional inhalation of volatile substances

To achieve intoxication

Erythema with blistering

"Huffing" computer cleaning spray

Hydrocarbon 1,1,1,2-tetrafluoroethane

Boiling point is -26.2 F°

Liquid contact can cause frostbite

Upper Aerodigestive Mucosa Damage  
can threaten the airway



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# Salt and Ice Challenge

- Skin burns
- Popularized on Youtube, Facebook, lay press



Williams JMD, Cubitt JJ, Dickson WA. Burns. 2013; 39:1024-30

<http://www.post-gazette.com/neighborhoods-city/2012/06/29/Boy-12-badly-injured-in-salt-and-ice-challenge/stories/201206290188>

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# Krododil

Injectable desomorphine  
made with corrosive  
fluids (lighter fluid,  
cleaning products)  
Cheaper than heroin  
Necrotizes  
Leads to green, scaly skin  
Hence- crocodile



[http://www.chicagotribune.com/news/local/suburbs/mchenry\\_woodstock\\_huntley/chikrododil-drug-mchenry-county-20131016.0.5939771.story](http://www.chicagotribune.com/news/local/suburbs/mchenry_woodstock_huntley/chikrododil-drug-mchenry-county-20131016.0.5939771.story)

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# The End

Thank you for your attention

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## Additional References

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Eichenfield, L. e. (2013). Evidence-Based Recommendations for the Diagnosis and Treatment of Pediatric Acne. *Pediatrics*, 131, S163-S186.

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