



present

LEADERS *in* ECZEMA

ONE-DAY FORUMS

Diagnostic and Treatment Challenges in Eczema

Diagnostic and Treatment Challenges

Presented by:

Rupam Brar, MD



Assistant Professor of Pediatrics
National Jewish Health

Conflict Disclosures

- Receives salary support from NIH

Key Diagnostic Features of Atopic Dermatitis

- Essential Features of AD
 - Intense pruritus
 - Chronic eczema with typical age related skin distribution
- Skin Distribution include:
 - Facial, neck and extensor involvement in infants and children
 - Flexural lesions in any age group
 - Sparing of the groin and axilla
- Important Feature – seen in most cases:
 - Early age of onset
 - Atopy (hx, immediate skin test reactivity or serum IgE)
 - Xerosis

Differential Diagnosis of Atopic Dermatitis

Immunodeficiencies

- Hyper-IgE syndrome
- DOCK 8 deficiency
- IPEX
- Wiskott-Aldrich syndrome
- SCID
- IPEX

Metabolic Diseases

- Zinc deficiency
- Phenylketonuria
- Essential fatty

Chronic Dermatoses

- Contact dermatitis
- Seborrheic
- Numular eczema

Neoplastic Disease

- Cutaneous T-cell lymphoma
- Mycosis fungoides
- Histiocytosis X
- Sézary syndrome

Infection and Infestation

- HIV associated dermatitis
- Scabies
- *Staphylococcus aureus*
- *Trichophyton*

Psoriasis

Dermatitis Herpetiformis

Case

- A 16 year old male is admitted to the Day Program for re-evaluation and management of his atopic dermatitis, allergic rhinitis, and asthma.
- Prior to admission, the young man reports that his skin became increasingly difficult to treat, particularly in the past year.
- He reports severe pain with baths, wraps and application of Vanicream. He complains of facial pain due to dried, cracked lips.
- On exam he is noted to have fissuring around his mouth and swelling around the eyelids.
- His body reveals severe dry and red skin with signs of scratching.
- He is also noted to have flaking of his lateral eyebrows and scalp.

Diagnostic and Treatment Challenges

- Why is this young man so severe?
 - MRSA colonization
 - Does he have the wrong diagnosis?
 - Does he have a concomitant diagnosis?
- Why has he worsened on therapeutics that previously worked?
 - AD may be a risk factor for contact allergy
 - Due to impaired skin barrier
 - Allows for increased irritation and allergen exposure
 - Increased use of multiple topical products
- How can these concomitant diagnoses be managed?
 - Consider changes in skincare regimen
 - Emollients and TCS without propylene glycol

Glossary

- Concomitant diagnosis – occurring at the same time, may be secondary to the main diagnosis
- Contact Dermatitis – inflammation of the skin due to an outside exposure
- Excipient – inactive substance that may be the vehicle or medium for a drug or other substance
- Humectant – substance, which retains or preserves moisture

Concomitant Skin Conditions

- Contact dermatitis
- May have increased risk of CD in AD
- Consider CD in cases of AD where
 - Pt is refractory or worsened by topical ICS
 - Flares with use of certain topical products
 - Distribution is atypical
 - Occupational exposures
 - Hand or Eyelid eczema
- Diagnosis: Patch Testing

- Suspect when dermatitis is unresponsive to or worsened by use of corticosteroids
- Affects 0.5%-5.8% of suspected of ACD
- Coopman Classification (for contact allergy only)
 - Class A – Hydrocortisone acetate, Prednisone, Methyprednisolone, Tixocortol
 - Class B – Triamcinolone Acetonide, Desonide, Budesonide
 - Class C – Oral Betamethasone, Dexamethasone, Desoximetasone
 - Class D1 – Betamethasone Dipropionate, Clobetasol Propionate, Alclomethasone Dipropionate
 - Class D2 – Hydrocortisone Butyrate, Hydrocortisone Valerate

- Common Ingredients in Emollients and Topical Tx that can cause CD
 - Preservatives
 - MCI/MI
 - Excipients
 - Lanolin
 - Propylene Glycol
 - Sunscreens
 - Chemical sunscreens
 - Detergents
 - Cocoamidopropyle Betaine
 - Sodium Lauryl Sulfate

Lanolin

- Wool Alcohols
- Made from sheep sebum
- Found in Aquaphor
- Found in some topical corticosteroids (e.g. Desoximetasone)

Propylene Glycol

- Vehicle with humectant properties
- Found in Vanicream, Topical CS, Crisabarole, Pimecrolimus
 - Most common allergen in topical CS
- Serves as preservative in foods
 - Ice cream
 - Frostings
 - Box cake mixes
 - Salad Dressings
 - Food coloring
 - Entenmann's cakes

Propylene Glycol

TABLE III. Propylene glycol-free topical corticosteroids

	O	G	C	L	S
Amcinonide					
Cyclocort				X	X
Betamethasone dipropionate					
Alphatrex	X			X	X
Diprosone	X				X
Maxivate	X		X		
Betamethasone valerate					
Betatrex	X		X		X
Desowen	X				
Tridesilon	X		X		
Valisone	X			X	
Desonide					
Desowen	X				
Tridesilon	X		X		
Desoximetasone					
Topicort		X	X		
Topicort LP			X		
Diflorasone diacetate					
Florone	X				
Maxiflor	X				
Fluocinolone acetonide					
Synalar	X				
Flurandrenolide					
Cordran	X			X	
Halcinonide					
Halog	X				X
Hydrocortisone					
Hytone	X				
Lacticare HC				X	
Nutracort				X	
Hydrocortisone acetate					
Pramosone	X			X	
Hydrocortisone butyrate					
Locoid	X		X		
Triamcinolone acetonide					
Ariatocort	X				
Aristocort A			X		
Kenalog	X				

O, ointment; G, gel; C, cream; L, lotion; S, solution

Catanzaro JM, Smith JG.
Propylene glycol dermatitis. J
Am Acad Dermatol. 1991
Jan;24(1):90-5.

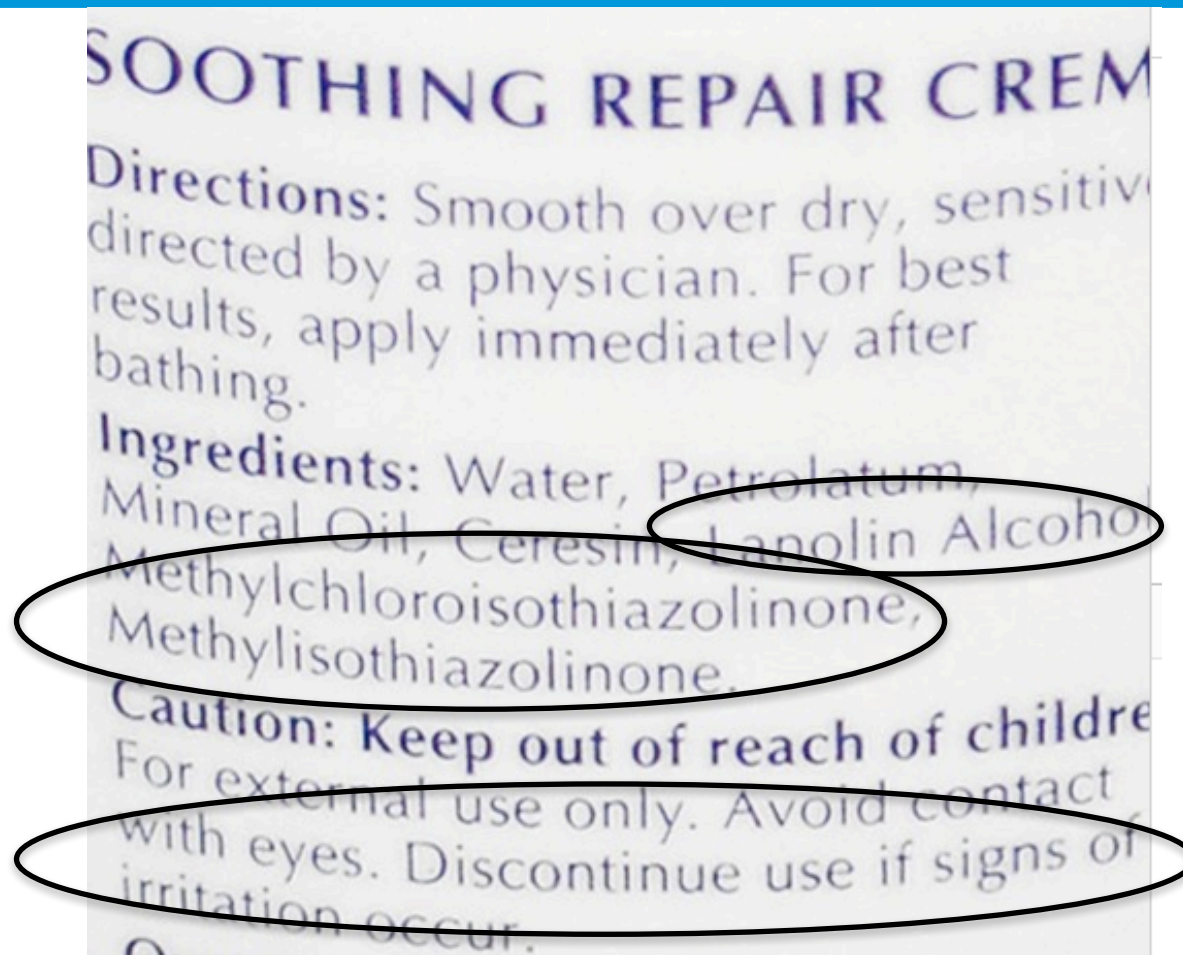
Methylisothiazolinone

- Methylisothiazolinone/Methylchloroisothiazolinone (MI/MCI), “Kathon CG”
- Biocidal preservatives added to bubble solutions, bubble baths, soaps, and cosmetics product
- Baby wipes leading to contact diaper dermatitis and facial dermatitis

“The Original Cream”



“The Original Cream”



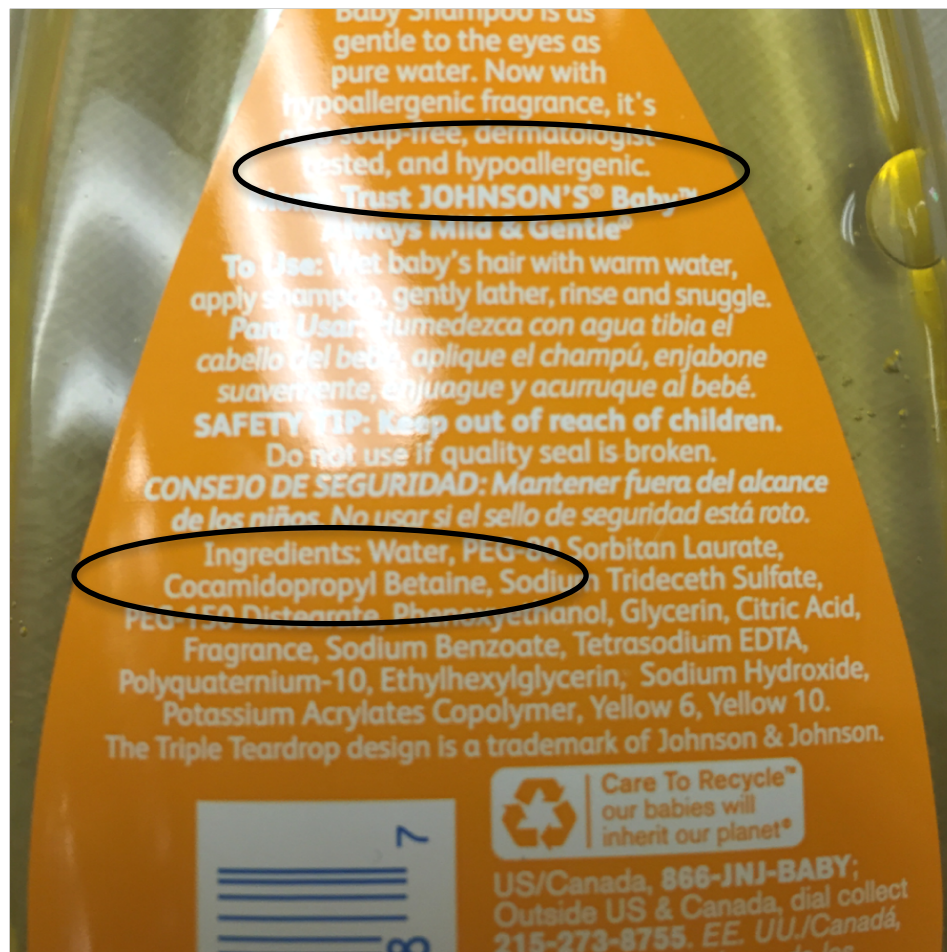
“Natural Care”



Cocoamidopropyl Betaine

- Surfactant first introduced by Johnson & Johnson in their “no more tears” shampoo
- Found in baby products, body washes, liquid soaps, toothpaste, contact lens solution, makeup removers, gynecologic products
- Was a top 3 allergen in a patch testing study in Beijing

“No more tears”



Concomitant Skin Conditions

- Seborrheic Dermatitis
- Bimodal - babies and adolescents/adults
- Sebarche – onset of sebum production¹
- Different Distribution²
 - Scalp
 - Eyebrows
 - Nasolabial folds
 - Ears
- Different appearance – flakes and greasy scale

Braun-Falco O, Plewig. et al. Disorders of the Sebaceous Glands. Dermatology. Springer Science & Business Media. 2000 Sep 27:1052-1054.

Fonacier L, Bernstein DI, Pacheco K, et al. Contact Dermatitis: A Practice Parameter – Update 2015. J Allergy Clin Immunol Pract. 2015 May-Jun;3(3 Suppl):S1-39.

Take Home Points

- Consider concomitant diagnoses
- Modify skincare if contact allergies are suspected
- Add on treatment for seborrheic dermatitis if present
- Consider Patch testing to evaluate for contact allergy



NATIONAL
Eczema
ASSOCIATION

**“You are the lotion that
moisturizes my heart. Without you
my soul has eczema”**

Aziz Ansari

References

- Fonancier L, Bernstein DI, Pacheco K, et al. Contact Dermatitis: A Practice Parameter – Update 2015. J Allergy Clin Immunol Pract. 2015 May-Jun;3(3 Suppl):S1-39.
- Al Jasser M, Mebuke N, de Gannes GC. Propylene Glycol: An Often Unrecognized Cause of Allergic Contact Dermatitis Using Topical Corticosteroids. Skin Therapy Lett. 2011 May;16(5):5-7.
- Funk JO, Maibach HI. Propylene glycol dermatitis: re-evaluation of an old problem. Contact Dermatitis. 1994 Oct 31(4):236-41.

Diagnostic and Treatment Challenges



- Questions/Comments?
- Brark@njhealth.org