Diagnostic and Treatment Challenges in Eczema
Diagnostic and Treatment Challenges

Presented by:

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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**
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**
Corticosteroid Allergy

• 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


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0. ointment; G. gel; C. cream; L. lotion; S. solution.
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”

Soothing Repair Cream

Directions: Smooth over dry, sensitive skin, directed by a physician. For best results, apply immediately after bathing.

Ingredients: Water, Petrolatum, Mineral Oil, Ceresin, Lanolin Alcohol, Methylchloroisothiazolinone, Methylisothiazolinone.

Caution: Keep out of reach of children. For external use only. Avoid contact with eyes. Discontinue use if signs of irritation occur.
“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 production
- Different Distribution
  - Scalp
  - Eyebrows
  - Nasolabial folds
  - Ears
- Different appearance – flakes and greasy scale

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

Aziz Ansari
References


Diagnostic and Treatment Challenges

• Questions/Comments?
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