Atopic dermatitis: Update

John Frith D.O.
Allergy/Immunology Fellow PGY4
University Hospital Richmond Medical Center
Atopic Dermatitis: Definition

- Atopic dermatitis = eczema = itchy skin

- Greek- meaning
  - (ec-) over
  - (-ze) out
  - (-ma) boiling
Atopic Dermatitis: Cause

- AD is a complex inflammatory process
AD is the first manifestation of atopy in many patients who later have allergic rhinitis, asthma, or both, a pattern that has been referred to as the “allergic or atopic march.”

Affects 25% of children younger than 14 years*

The diagnosis of AD is based on its **clinical presentation** rather than the results of diagnostic testing.

**Other Helpful testing:**
- Skin prick testing
- Specific IgE to relevant allergens
- Patch testing
Morphology

- erythema
- edema
- vesicules
- eczematous pitting
Distribution

Atopic Dermatitis: Treatment

- Trigger avoidance
- Measures to restore skin barrier function
- Anti-inflammatory medication
1. Reduce contact with irritants/allergens
2. Emollients
3. Antihistamines
4. Antibiotics
5. Topical Steroids
1. Reduce contact with irritants/allergens

- Avoid overheating: lukewarm baths, 100% cotton clothes, & keep bedding to minimum

- Avoid direct skin contact with rough fibers, particularly wool, & limit/eliminate detergents

- Avoid cosmetics, fragrances (make-ups, perfumes) as all can irritate

- Avoid soap- use soap substitute

- Use gloves to handle chemicals and detergents

- Patch testing
1. Reduce contact with irritants/allergens

- Allergic reactions include:
  - House dust mite, molds, grass pollens & animal dande
  - Keep bedroom, free of dust mites via washing of bedding in hot water and using mite free covers.

- If food allergies exists, the most likely culprits are:
  - Dairy products
  - Eggs
  - Wheat
  - Soy
  - Nuts
  - Shellfish
2. Emollients

- Emollients soften the skin soft and reduce itching.

- Moisture Trapping effectiveness
  - **Best**: Oils (e.g. Petroleum Jelly)
  - **Moderate**: Creams
  - **Least**: Lotions

- Apply emollients after bathing and times when the skin is unusually dry (e.g. winter months).
Some patients might benefit from the use of antihistamines for the relief of pruritus associated with AD.

Treatment of AD with topical antihistamines is generally not recommended because of potential cutaneous sensitization.
4. Antibiotics

- Atopic dermatitis frequently secondarily colonized with a bacteria
- Staphylococcus aureus are a recurrent problem in patients with AD
5. Corticosteroids

- Topical steroids are very effective

- If AD is not controlled by moisturizers alone, then the clinician should recommend a topical corticosteroid
  
  - Low-potency corticosteroids are recommended for maintenance therapy
  - Intermediate and high-potency corticosteroids should be used for the treatment of clinical exacerbation over short periods of time.
Steroid sparing agents are also available:
- Topical tacrolimus, pimecrolimus

There are a variety of other treatment options for patients with severe or refractory AD:
- Wet dressings and occlusion
- Bleach baths
- Systemically administered immunosuppressants, such as cyclosporine and antimetabolites.
Take Home Points

- Treatment options
  1. Reduce contact with irritants/allergens
  2. Emollients
  3. Antihistamines
  4. Antibiotics
  5. Topical Steroids

- There is no CURE for eczema but the goal is CONTROL
Thank you