Atopic Dermatitis
‘The itch that rashes’

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What is Atopic Dermatitis?

A subset of eczema characterized by intense itching with a chronic relapsing course.

- The most common chronic inflammatory skin disease

- Most often develops during infancy

Photo courtesy of Julie V Schaffer, MD. From Elsevier

Photo courtesy of Elsevier
How do I manage the atopic patient?

- How do I make the diagnosis?
- What are the associated diagnoses?
- What can I do to control this disease?
Making the Diagnosis

- Which population is atopic dermatitis most often seen in?
- What will you hear from the patient?
- What will you see on the patient?
Epidemiology

Males > Females

Genetic inheritance

Age of Onset:
- 60% by age 1 year
- 30% age 1-5 years
- 10% age 6-20 years
- Very rarely adult onset

Environmental considerations
- Aeroallergens increase exacerbations
- Microbial agents’ exotoxins
- Autoallergens
- Foods: eggs, milk, peanuts, soybeans, fish and wheat

Other exacerbating factors:
- skin barrier disruption,
- infections, season, clothing, emotional stress
Pathogenesis

Atopic dermatitis is a complex genetic and environmental skin condition.

Genetic Factors
- Filaggrin gene (FLG)

Epidermal Barrier Dysfunction
- Altered stratum corneum leading to increased transepidermal water loss
- Failure to generate ceramides
- Deficiency of filaggrin
- Causes an increased penetration of environmental irritants and allergens into the skin

Inflammation
- Proinflammatory cytokines
- The skin may be a “point of entry” for atopic sensitization and deliver systemic signals promoting systemic sensitization

Microbial Colonization

Autoimmunity
What will you hear from your patient?

✧ “It itches really badly.” – patient
✧ “He/She won’t stop scratching, I don’t know what to do to make him/her stop.” – parent

✧ Common concerns from the patient: itching, scratching, changes in pigment, dryness, redness, puffiness

✧ Associated symptoms to ask about: sneezing, rhinorrhea, conjunctival and pharyngeal pruritis
### What will you see on exam?

**Acute Findings**

- Erythematous patches, papules and plaques
- Widespread edema
- Excoriations, often moist and/or crusted
- Extremely dry/scaly/cracked skin

**Chronic Findings**

- Lichenification
- Deep fissures
- Alopecia
- Dyspigmentation
- Follicular lichenification
Associated Features

- Xerosis – dry skin without clinically apparent inflammation
- Ichthyosis vulgaris – excessive fine, whitish to brown scaling
- Keratosis Pilaris – keratotic follicular papules
- Palmar and plantar hyperlinearity – increased prominence of creases
- Dennie-Morgan lines
- Allergic shiners
- Anterior neck folds
- Hertoghe sign
- White Dermographism
- Follicular prominence

Photo courtesy of Elsevier and Jean L. Bologna, MD.
# Diagnostic Features

<table>
<thead>
<tr>
<th>Major Features (3 of 4 present)</th>
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<tbody>
<tr>
<td><strong>Pruritis</strong></td>
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<td><strong>Typical morphology and distribution of lesions</strong></td>
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<td><strong>Chronic or chronically relapsing dermatitis</strong></td>
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<td><strong>Personal or family history of atopy</strong></td>
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<table>
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<th>Minor Features (3 of 23 present)</th>
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<td><strong>Xerosis, Ichthyosis/KP, immediate skin test reactivity, elevated serum IgE, early age of onset, tendency toward cutaneous infections, tendency toward non-specific hand or foot dermatitis, nipple eczema, cheilitis, recurrent conjunctivitis, Dennie-Morgan sign, keratoconus, anterior subscapular cataract, orbital darkening, facial pallor/erythema, pityriasis alba, anterior neck folds, pruritis when sweating, intolerance to wool and lipid solvents, perifollicular accentuation, food intolerance, course influenced by environmental/emotional factors, white dermographism</strong></td>
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Diagnostics Guidelines

- An itchy skin condition (or a parental report of scratching or rubbing in a child)

- Plus three of the following:
  - History of involvement of the skin creases
  - A personal history of asthma or hay fever
  - A history of generally dry skin in the last year
  - Visible flexural eczema
  - Onset under 2 years of age
Differential Diagnoses

- Seborrheic dermatitis
- Irritant/allergic contact dermatitis
- Psoriasis
- Dermatophytosis
- Early stages of Mycosis Fungoides
Associated Diagnoses

- Atopic Triad
  - Asthma
  - Allergies
  - Atopic Dermatitis

- Conditions to monitor for:
  - Secondary Infections
  - Lichen Simplex Chronicus

Photo courtesy of Wikimedia
How to manage your atopic patient

Treatment versus Maintenance
And developing a Skin Care Regimen
Treatment

During Flares

- **Anti-inflammation**
  - Corticosteroids
  - Calcineurin Inhibitors

- **Anti-pruritics**
  - Benadryl, Hydroxyzine
  - Topical anti-itch creams/gels

- **Antibiotics**
  - Topical Mupirocin
  - Oral Antibiotics appropriate to secondary infection

Photo courtesy of National Eczema Association
Maintenance

- OTC oral Antihistamines daily
- Calcineurin Inhibitors
- Skin Care Regimen
  - Moisturizers
    - Hylatopic Plus
    - Aveeno Intense Repair Cream
Patient Education

There is no cure, only management.

- OTC antihistamine daily
- Shower rules: No loofas, plain Dove liquid body soap, warm water/never steaming hot, moisturize post-shower while skin is still WET
- Gentle hand soap for washing hands, follow with moisturizer
- Free and Clear Laundry detergent
- Avoid sanitizer
Questions?

Please feel free to contact me at briannakay.pa@gmail.com