Atopic Eczema and mimics

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Atopic Dermatitis: Essential Features

- Pruritus
  - Rash with typical morphology and age-specific patterns
    - Face, neck and extensor involvement in infancy
    - Flexural involvement in children and adults
    - Spares groin and axillae
Atopic Dermatitis

- Early age at onset
  - 80-90% diagnosed by age 5
- Atopy
  - Personal and/or family history
  - 50% concordance in twins
- Xerosis due to abnormal barrier function
Filaggrin

- Filaggrin mutations are associated with AD – 50% of white Europeans have null mutations
- IL-4, II-13 and IL-17A downregulate filaggrin expression, so altered immune response may lead to filaggrin dysfunction
Atopic Dermatitis: Epidemiology

- Increasing prevalence in industrialized countries
  - 10 -15% of population
  - Children more than adults
- Increasing prevalence mimics rise in asthma
  - Several theories, including hygiene hypothesis
Clinical Course

- Remissions and exacerbations with frequency of exacerbations decreasing with age
- 80% clear or markedly improved by age 20, 20% same or worse
- More severe childhood disease generally portends higher risk of persistence
- Asthma develops in 30%, hayfever in 60%
The Atopic March


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Microbes as Stimulators of Dermatitis

- High prevalence of staphylococcal colonization (decreased canthelicidins and defensins)
- Staph may serve as superantigen stimulant
- Specific staph-enterotoxin antibodies found in AD children
- Staph-enterotoxin specific IgE correlates with AD severity
Exacerbating factors

- Over bathing
- Heat
- Infections
- Contact and ingested allergies
- Emotional Stress
Food Allergy and Atopic Dermatitis

- 10-20% have relevant food allergies (50-80% have positive skin or RAST tests)
- Most food reactions develop within 2 hours of ingestion and usually appear morbilliform or urticarial
- 90% will react to only 1 or 2 foods
- 90% of all food allergies are due to egg, peanut, milk, wheat, or soy
Exclusive breast feeding has not been shown to be protective

Delayed introduction of solid foods beyond 4-6 months may paradoxically increase food allergies.
Treatment

- Emollients are the mainstay of treatment
- Education of utmost importance
Bathing Recommendations

- Bathe daily for 5-15 minutes in warm, not hot, water
- Use a moisturizing cleanser (minimally, just where needed)
- After bathing, pat dry and immediately apply topical medication followed by an emollient, or emollient alone
- Bleach baths: ¼ cup bleach in half bathtub of water to decrease bacteria
Use of topical steroids

- Lowest effective strength
- Apply only once to twice daily
- Use higher potency topical steroids in “pulses”
- Taper off
- Optimize adjunctive therapies
  - Skin hydration
  - Avoidance of irritants/exacerbants
Wet Dressings

Layered process done BID to TID

- Corticosteroid Cream to involved areas
- Then emollient cream
- Damp ( tepid) wrap or cotton PJ’s
- Then dry cotton layer
Topical calcineurin inhibitors

- Protopic (tacrolimus) 0.03%, 0.1% ointment
- Elidel (pimecrolimus) 1% cream

Advantages
- No HPA axis suppression
- No atrophy

Disadvantages
- Not FDA approved under age 2
- Black Box warning
Other treatments

- **Antibiotics**: Use for evidence of secondary infection. Agents should cover staph aureus and streptococci.
- **Antihistamines**: Data regarding efficacy meager.
- **House dust mite elimination** helpful in selected patients (enclosing mattresses, frequent vacuuming, removing carpet).
Other treatments

- Phototherapy
- Systemic steroids not indicated in vast majority of patients and are not appropriate for chronic use
- Other systemic immuno modulators limited to severe AD
Differential Diagnosis includes:

- Irritant and allergic contact dermatitis
- Seborrheic dermatitis
- Psoriasis
- Nummular eczema
- Scabies
- Pityriasis alba
- Juvenile plantar dermatosis
- In infants: Wiskott-Aldrich, Langerhans cell histiocytosis
Wiskott-Aldrich

- X-linked recessive
- Thrombocytopenia
- Recurrent infections
- Atopic dermatitis
Nummular Eczema

- Nummular (coin-shaped) 1-5 cm plaques of red papules or vesicles +/- exudate and crust
- Become dry, scaly, and less red
- Usually trunk and extremities
- Pruritus can be mild to severe
- Treatment: Emollients and topical corticosteroids
Lichen Simplex Chronicus
Clinical Presentation

- Focal plaque of thickened, lichenified skin
- Due to chronic rubbing or scratching
- Intense itching
- Common locations: lower legs, ankles, wrists, posterior neck, extensor forearms, anogenital
- Treatment: Potent topical steroids +/- occlusion
Seborrheic Dermatitis
Clinical - Infants

- Scalp ("cradle cap"), flexural creases, diaper area
- Sharply demarcated, erythematous patches & plaques w/ scale
- Generally asymptomatic
Treatment of Seborrheic Dermatitis

- Patient education
- Antidandruff shampoos
- Antifungal shampoo/cream
- Low potency topical Steroids
- Topical ketoconazole
Psoriasis: A systemic disease

- Diseases increased in individuals with psoriasis
  - Arthritis 25%
  - Depression and suicidal ideation
  - Inflammatory bowel disease
  - Lymphoma
  - Cardiovascular Disease (even when adjusted for other risk factors)
  - Diabetes
  - Obesity
  - Lipid abnormalities (even after adjustment for other risk factors)