

# **Seborrheic Dermatitis**

## **Background**

### 1. Definition

- Common condition of skin regions rich in sebaceous glands characterized by flaking, erythema, itching
- May present at all ages
- In infants often presents as "Cradle cap" on the scalp and in adults as a rash in the nasolabial folds and brows, chest, axilla, under breasts, around the umbilicus or scalp

## **Pathophysiology**

### 1. Pathology of disease

- Etiology unknown but several hypotheses
  - Fungal infection
    - Causal relationship with yeasts *Malassezia furfur* and *Malassezia ovalis*
    - Also associated with HIV/AIDS
  - Hormone levels
    - Correlated with infancy and re-appearance at puberty
  - Nutritional
    - Mechanism unclear
  - Altered fatty acid pattern
    - Associated with infantile variant
  - Neurogenic factors
    - Higher percentages in those with Parkinsonism, post-CVA, epilepsy, CNS trauma, facial nerve palsy, syringomyelia

### 2. Incidence, prevalence

- Men > women
- Infants < 6 months (usually)
- Adolescents, young adults; adults 30-60 years
- 1-3% in immunocompetent adults
- Underreported in mild cases

### 3. Risk factors

- Unrelated to personal cleanliness

### 4. Morbidity / mortality

- Psychosocial is primary morbidity in most
  - Secondary infection may produce weeping dermatitis/crusting
  - If involves 90% or more of body referred to as erythroderma or exfoliative dermatitis
  - Erythroderma Desquamativum (Leiner's disease)
    - Severe seborrheic dermatitis with diarrhea and lymphadenopathy in infants
    - Check for immunodeficiencies (SOR:C)<sup>1</sup>

## **Diagnostics**

1. History
  - Itching, scaling, burning (active phase)
  - More in winter, early spring; followed by inactive period, in characteristic locations
2. Physical exam
  - Red, flaky greasy appearance in scalp (dandruff), eyebrows, lid margins (blepharitis), behind ears, nasolabial folds, pre-sternal, axilla, navel, groin, infra-mammary, anogenital; hypopigmentation in blacks; symmetric distribution
  - 2 rash types on chest
    - Petaloid
      - Reddish brown, follicular, and peri-follicular papules with greasy scales
      - Papules may expand to flower-petal shaped patches
    - Pityriasiform (less common)
      - Generalized macules and patches, common on trunk and neck, similar to pityriasis rosea
  - Infantile
    - 2nd week - 6 months (or longer)
      - Scalp (cradle cap = pityriasis capitis), face, ears, flexural folds
      - Symptoms mild
      - Resolves with time on own in most
3. Diagnostic testing
  - Usually not required
  - If in doubt, skin scraping/biopsy to rule out tinea infection although often responds to topical antifungals anyway

## **Differential Diagnosis**

1. Scalp
  - Tinea capitis, psoriasis, infected eczema
2. Face
  - Rosacea, facial chapping, SLE
3. Body
  - Atopic eczema, psoriasis, tinea versicolor, drug eruptions, candidiasis (groin), staph blepharitis
4. Infants
  - Atopic eczema, scabies, psoriasis, irritant contact dermatitis

## **Therapeutics**

1. High recurrence rate, goal is most often control, not cure
  - If severe/widespread, assess if diagnosis correct or if patient immunocompromised
2. Infants
  - Will spontaneously resolve in wks-months

- Overnight soak with baby oil, white petroleum jelly; wash with baby shampoo
- If ineffective, ketoconazole 2% cream once daily
  - Ketoconazole appears to be safe and efficacious for infants with cradle cap
  - Other OTC topical antifungals also likely effective.
- Topical steroids not advised other than possibly briefly for diaper areas
- 3. Adults and adolescents
  - Scalp and beard
    - Tx may include topical keratolytics, antifungals and steroidal creams/liniments
    - Antifungals (2-3 times/wk for 2-4 weeks)
      - Ketoconazole 2%
      - Clotrimazole 1%
      - Selenium sulfide 1% (Selsun Blue) or 2.5% (Exsel, Sesun)<sup>2,3</sup>
    - Keratolytics (2-3 times/wk initially then as needed)
      - Coal tar (DHS Tar, Zetar, Ionil T Plus)
      - Salicylic acid 2% cream/gel/lotion/shampoo (Fostex, Stidex)
      - Sulfur 2-3% cream/lotion/shampoo
      - Pyrithione zinc 1% (Dandrex, Zincon, Head & Shoulders) and 2% (DHS Zinc, Sebulon)
      - Patient should leave in hair at least 5 mins to ensure these agents get deep into scalp
      - Warm mineral oil with combing of crusts also used.
    - Topical steroids/liniments (2-4 wks)
      - Shampoo (fluocinolone, twice weekly)
      - Steroid solutions (fluocinolone, once daily)
      - Lotion (betamethasone valerate, once daily)
      - Cream (desonide, once daily)
      - Effective in treatment of adult seborrheic dermatitis of scalp (SOR:C)<sup>1,4</sup>
  - Face and body
    - Antifungal shampoos (listed above) can be used frequently on affected areas
    - Ketoconazole 2% cream, 1-2/day for 4 wks or until clinical clearing
      - Consider mild corticosteroid cream to settle inflammation quickly
      - Ketoconazole qD topically with desonide qD for 2 weeks may be useful for facial dermatitis
    - Topical calcineurin inhibitors (eg tacrolimus ointment, pimecrolimus cream) for face, ears once daily; have fungicidal and anti-inflammatory properties
      - Daily use for 1 week necessary before benefits seen (SOR:B)<sup>1</sup>
  - Blepharitis
    - Gentle cleansing of eyelid margin twice daily with cotton swab dipped in 1/2 cup warm water containing 2-3 drops baby shampoo

### **Follow-Up**

1. F/U if poor response to treatment, worsening symptoms, infection
2. Refer to specialist
  - Severe, widespread
  - Diagnostic uncertainty
  - No response to treatment

### **Patient Education**

1. <http://familydoctor.org/online/famdocen/home/common/skin/disorders/157.html>

### **Evidence-Based Inquiry**

1. What is the best treatment for cradle cap?

### **References**

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