Demystifying Dermatologic Diagnoses in Primary Care

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Disclosures and Images

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Learning Objectives

At the conclusion of this session, participants should be able to:

- Recognize the most common primary care presentations of dermatologic disease focusing on morphology and distribution to narrow differential diagnoses.
- Formulate initial treatment options for common papulosquamous and infectious skin conditions.
- Gain confidence and enjoyment in seeing patients with generalized rashes and other dermatologic conditions in primary care.

Top Dermatologic Diagnoses in Primary Care

- Impetigo
- Ecthyma
- Furuncle/Carbuncle
- Cellulitis
- Erysipelas
- Warts
- Molluscum
- Pityriasis rosea
- Tinea versicolor
- Tinea corporis
- Atopic dermatitis
- Contact dermatitis
- Seborrheic dermatitis

Diagnosis of Skin Disease by Non-dermatologists
Alan B. Fleischer, Jr, MD; Courtney-Regan Herbert, MPH; Steven R. Feldman, MD, PhD; and Francis O'Brien, MD, ***Am J Manag Care 2000;6:1149-1156***

Evaluation of a Rash

- Enforce a “get naked” policy
- Good lighting
- Take a “hands on” approach

- What is the type of lesion?
  - Color and shape?
  - Surface characteristics
    - Scaly or not?
- Arrangement and pattern?

Image source: https://www.bing.com/images
https://www.delasco.com/shop-all/examination/
https://work.chron.com/educational-requirements-become-dermatologist-8497.html

Describing a Rash: Primary Lesions

- Macule/Patch – Flat, non-palpable lesion
- Papule/Nodule – Raised lesion
- Plaque – A plateau-like lesion, confluent papules
- Vesicle/Bulla – Circumscribed, elevated lesion containing fluid
- Pustule – Elevated lesion containing pus
- Wheal – Transient, elevated, edematous lesion often with clearing in center
- Maculopapular – Some flat, some raised
- Target/Iris – Concentric circles, different colors or levels

Describing a Rash: Secondary Changes

- Lichenification - Thickened skin with distinct borders
- Crusted - Hard and rough surface caused by dried sebum, exudate, blood, or necrotic tissue
- Scaly - Heaped up horny epithelium, flaky
- Macerated - Increase in water content, soggy
- Fissure - Thin, linear erosion or ulcer
- Atrophy - Loss of skin or tissue, thinning, shiny
- Excoriated - Shallow hemorrhagic excavation, linear or punctate, from scratching
- Erosion - Partial break in epidermis
- Ulcer - Full thickness loss of the epidermis

11 yo patient presents for evaluation of the following skin lesions on her face

- Yellow ulcers and erosions with crusting and surrounding erythema scattered on chin and cheeks; some scaling or flaking on chin.

Image source: https://dermnetnz.org/

Impetigo/Ecthyma – Diagnostic Pearls

- **Impetigo** – highly contagious superficial skin infection primarily caused by – *S. aureus* (1-10% CA-MRSA)
- Lesions begin as vesicles or pustules that quickly transition to erosions with crusting, small inflammatory halos
- Face and extremities most common sites
- Mild LAD, no systemic symptoms

- **Ecthyma** – deeper dermal pyoderma
- Lesions are typically tender, edematous and heal with scarring
- LAD and systemic symptoms present
- Diagnostic testing – Gram stain, culture – recommended by IDSA 2014
- Typical cases – empiric treatment

Impetigo/Ecthyma – Treatment

- Practice Guidelines for Diagnosis and Management of Skin and Soft Tissue Infections: 2014 Update by IDSA https://www.idsociety.org/practice-guideline/skin-and-soft-tissue-infections/
- Topical treatment for limited impetigo
  - Mupirocin, Retapamulin – BID for 5 days
  - Soak to remove crust
- Oral for numerous impetigo, in outbreaks, and for all ecthyma
  - CA-MRSA – Doxycycline, Clindamycin, TMP/SMX – 7 days
  - MSSA - Dicloxacillin, Cephalexin – 7 days

Patient presents for evaluation of the following skin lesion on anterior chest

- Erythematous, tender, firm nodule measuring 1.5 X 2 cm without pustular head or fluctuance.

Image source: https://dermnetnz.org/

Purulent Infections – Diagnostic Pearls

- Folliculitis – single follicle
- Furuncle – deeper, yet still one follicle
- Carbuncle – larger, often with fever, LAD, fatigue
- Gram stain and culture are ideal
- Mild, moderate, severe classifications

- Most purulent infections = *Staphylococcus aureus (MSSA and MRSA)*

Purulent Infections – Treatment

- Incision and Drainage
  - Warm, moist compresses
- Add on oral or parenteral antibiotics

Image source: https://www.idsociety.org/globalassets/idsa/practice-guidelines/practice-guidelines-for-the-diagnosis-and-management-of-skin-and-soft-tissue-infections-2014-update-by-the-infectious-diseases-society-of-america.pdf

Traditional I&D and Loop Drainage Technique

https://vimeo.com/19580472

https://aneskey.com/cutaneous-abscess-or-pustule/

Addition of Antibiotics in Purulent Skin Infections per IDSA 2014

- Temp > 38 degrees C or < 36 degrees C
- Tachypnea > 24/min
- Tachycardia > 90 bpm
- WBC > 12,000 or < 4,000

- Immunosuppression
- Hypotension

Guidelines vs Actual Management of Skin and Soft Tissue Infections in the ED

Kamath RS, et al. OFID 2017

- 214 cases of SSTI in ED retrospectively analyzed at Michael E. DeBakey Veterans Affairs Medical Center, Houston

- Total number that were managed in accordance with IDSA 2014 guidelines in all 4 categories (site of treatment, choice of antibiotic, I&D of abscess, ordering cultures)

43/214 = 20.1%

Systemic Antibiotics – New Data

Gottlieb, M et at. A Systematic Review and Meta-Analysis. Annals of Emergency Medicine Vol 73, No 1, January 2019.

- All randomized controlled trials comparing systemic antibiotics (MRSA coverage) vs placebo in the treatment of skin abscesses after I&D
- 4 studies, 16 clinical sites in US, ED and one outpt setting = 2,406 patients (4-44 yo)
- Most used TMP/SMZ, one used clindamycin
- Overall cure rate for abscesses after I&D was high in both groups
- Nearly 2-fold improvement in cure rates and a NNT of 14 for antibiotic groups
  - Reduced number of return visits and need for painful repeat I&D, return to work sooner, decreased incidence of new lesions, decreased rate of infections in household members

To Pack or Not to Pack

NO

- 5 cm or less
- Immunocompetent pt
- Less pain
- No change in cure rate
- No change in secondary interventions

Maybe or YES

- Larger abscesses
- Consider the area
- Immunocompromised pts have not been studied

Source: List M et al. Treatment of Skin Abscesses: A Review of Wound Packing and Post-Procedural Antibiotics. South Dakota Medicine, March 2016.

Recurrent Skin Abscesses

- Consider 5 day decolonization regimen:
  - Twice daily intranasal mupirocin
  - Daily chlorhexidine washes
  - Daily decontamination of personal items such as towels, sheets, and cloths for recurrent *S. aureus*
- Evaluate adult patients for neutrophil disorder if recurrent abscesses began in childhood
- Search for local causes – pilonidal cyst, hidradenitis suppurativa, foreign body

A patient presents for evaluation of the following skin lesions.

- **Erythema and warmth with diffuse border on right cheek, palpable border and dermal edema present**

Image source: https://dermnetnz.org/

Cellulitis/Erysipelas – Diagnostic Pearls

- Erysipelas – bright red, more superficial, raised border, well-demarcated margin, preceded by flu-like symptoms, burning at site
- Cellulitis – deeper location to subcutaneous tissues, non-elevated, poorly defined margins,
- Usually caused by *Streptococcus* A, B, C, G
- Bedside ultrasound best option for differentiating abscess from cellulitis

Cellulitis/Erysipelas – Treatment

- Mild and typical with no evidence of purulence or trauma
  - Oral dicloxacllin, cephalexin, clindamycin for 5 days
- Moderate infections with systemic signs
  - IV ceftriaxone, clindamycin, cefazolin, penicillin
- Severe
  - Vancomycin plus piperacillin-tazobactam or imipenem
  - Additional corticosteroids
    - Prednisone 40 mg daily for 7 days
- Immobilization and elevation
- Treat tinea pedis
- Watch for worsening
  - Consider marking borders
- MRSA more likely
  - Penetrating trauma
  - Illicit drug use
  - Known nasal colonization
  - Purulent drainage
- MRSA = Vancomycin

Recurrent Cellulitis

- Risk factors
  - Tinea pedis
  - Obesity
  - Venous insufficiency
  - Lymphedema
- Prophylactic abx if 3-4 episodes per year despite treating predisposing factors
  - Pen VK or erythromycin orally twice daily for 4-52 weeks

Risk for Atypical Organisms

- Immunosuppression
- Animal or human bites
- Sea or freshwater exposure to broken skin
- Exposure to animals, fish, or reptiles
- IVD use

FDA approves 5 new antibiotics for SSTI (2013)

- Ceftaroline – Beta-lactam
  - MRSA and Enterbacteriaceae coverage
  - IV, 5-14 days
- Dalbavancin - Lipoglycopeptide
  - Once weekly dosing (2 total doses)
- Oritavancin - Lipoglycopeptide
  - Single dose formulation
- Tedizolid
  - Oral and parenteral forms
- Telavancin
  - Black boxes – renal impairment, QT

Patient presents for evaluation of the following skin lesions.

- Flesh-colored to light tan, papules 2-3 mm in diameter on chin and inner aspect of wrist, some coalescing and linear distributions noted.

HPV – Diagnostic Pearls

- HPV 1, 2, 3, 4, 10, 27, 57
- Most common in children and young adults (nearly 50% affected), increasingly seen in patients with atopic dermatitis and decreased cell-mediated immunity
- Types – verruca vulgaris, plantaris, plana, filiform
- Clinical diagnosis
  - Thrombosed capillaries
  - Altered dermatoglyphics

HPV – Treatment

- Spontaneous remission in 50% by 1 year, 2/3 of patients in 2 years, especially children
- Treatment indicated
  - Pain/discomfort, functional impairment
  - Concern for cosmesis or social stigma
  - Persistent warts
  - Immunosuppression

HPV- Treatment

- Chemical or physical destruction
  - Salicylic acid – irritation and exfoliation, paints or plasters, applied daily after paring with occlusion for 3-4 months
  - Cryotherapy – every 2-3 weeks for 3 months, keep wart frozen for 15-30s
  - Combo of both
- Enhancement of local immune response
  - Imiquimod
  - Contact or intralesional immunotherapy
- Antiproliferative therapy
  - 5-FU
  - Bleomycin
  - Tretinoin

An Option for Recalcitrant and Extensive Warts?

- Intralesional or intramuscular HPV vaccine
  - Nofal A et al. Intralesional versus intramuscular bivalent human papillomavirus vaccine in the treatment of recalcitrant common warts, J Am Acad Dermatol vol 82, No 1, July 2019.
  - Waldman, Abigail MD; Whiting, Dennis PA-C; Rani, Monica MD; Alam, Murad MD, MSCI, MBA, HPV Vaccine for Treatment of Recalcitrant Cutaneous Warts in Adults A Retrospective Cohort Study. Dermatologic Surgery: December 2019 - Volume 45 - Issue 12 - p 1739–1741

Patient presents for evaluation of the following skin lesions.

- Multiple flesh-colored to pink papules, firm, umbilication, surrounding erythema, some coalescing on periorbital area

Image source: https://dermnetnz.org/

Molluscum Contagiosum – Diagnostic Pearls

- Benign, self-limited disease
- Caused by a pox virus
- Most common ages 1-4
- More common in pts with atopic dermatitis and with swimming
- In adolescents and adults, consider STIs and immunocompromised states

- Clinical diagnosis
  - Small, firm, pearly papules with a central depression
  - Core may be expressed, producing a white cheesy material
  - The lesions average 2 to 5 mm in size and are usually painless, but may become inflamed, red, and swollen
  - Distribution typically face, truck, limbs

MCV – Treatment

- Treatment is for cosmesis and to prevent spreading
- Destructive therapies most common
  - Curettage – most successful, least number of visits, greatest parent satisfaction
  - Cantharidin
  - Cryotherapy
- Patience
  - 50% completely resolved 1 year
  - 70% at 18 months
  - BOTE sign “Beginning of the end”
    - Clinical erythema and swelling of the lesion when regression phase begins
- Other therapies not proven superior to destructive therapies
  - Imiquimod
  - KOH
  - Salicylic acid
  - Retinoids

https://childhood101.com/kids-health-molluscum-contagiosum/

Verrica develops a solution for common warts

Del Rosso JQ, Kircik L. Topical Cantharidin in the Management of Molluscum Contagiosum: Preliminary Assessment of an Ether-free, Pharmaceutical-grade Formulation. *J Clin Aesthet Dermatol*. 2019;12(2):27–30.

Source: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6415708/

14-year-old male presents for evaluation of red circular rash on his body that he noticed after soccer practice yesterday.

- Scattered light pink to erythematous plaques with slight scale on trunk, larger lesion with central clearing on left anterior shoulder

Image source: https://dermnetnz.org/

Pityriasis Rosea – Diagnostic Pearls

- Self-limiting skin condition
- Reactivation of HHV-6/7
- Typically presents in 10-35-year-old pts
- Herald patch appears first on truck in 90% of cases (lasts for 2 weeks in isolation)
- Prodromal symptoms – malaise, nausea, headache, URI, concentration difficulty, ST, body aching
- Secondary eruption on trunk in Langer lines and to proximal extremities (lasts for up to 12 weeks)
- All lesions have scaling and are typically pruritic
- Some medications associated with PR-like eruption – ACEI, NSAID

Image source: https://dermnetnz.org/topics/pityriasis-rosea-images/

PR – Treatment

- Self-limited = watchful waiting, patience
- Treat options
  - Oral antihistamines
  - Oral or topical corticosteroids
  - Acyclovir (maybe)
  - Phototherapy also hastens resolution
- No benefit to macrolides

6-year-old male presents for evaluation of this pruritic eczematous rash on his torso

- It developed over the past week as an initial small circular lesion that has spread

http://www.crestingthehill.com.au/2015_04_01_archive.html
http://advancedskinmd.com/ /

Tinea Corporis – Diagnostic Pearls

- Usually presents as annular, scaly plaques
- At risk groups
  - Contact sports
  - Domestic animal contact
  - Warm, humid climates
  - DM, immunodeficiency
- Typical organisms
  - *M. canis*
  - *T. rubrum, mentagrophytes, tonsurans*
- Diagnostic options
  - KOH
  - Wood’s lamp
  - Culture
  - Biopsy

Tinea Corporis – Treatment

- Topical antifungals
  - Azoles
    - Econazole
    - Oxiconazole – comes in a lotion form for more hairy areas
  - Allylamines
    - Terbinafine
    - Naftifine
- Oral antifungals
  - Terbinafine
  - Itraconazole

- Twice a day application of topicals for 4-6 weeks generally
- Keep skin cool and dry
- Avoid combination products with steroids and antifungals
- Topical nail lacquers modestly effective
  - Efinaconazole
  - Tavaborole

Majocchi’s granuloma

- Perifollicular lesions
- *T. rubrum, T. mentagrophytes*
- Systemic therapy needed

Image source: https://dermnetnz.org/topics/majocchi-granuloma/

Patient presents for evaluation of the following skin lesions.

- Onycholysis and white chalky discoloration of great toes with yellow subungal debris

https://dermnetnz.org/

Onychomycosis – Diagnostic Pearls

- Most often occurs in adults
  - Nail injury increases risk
- *T. rubrum* most frequent dermatophyte
- Common clinical manifestations
  - Nail discoloration
  - Subungual hyperkeratosis
  - Onycholysis
  - Nail plate splitting and destruction
- Diagnostic testing
  - KOH - screen
  - Fungal culture & PCR – identify the organism before treatment

Onychomycosis – Treatment

- Mild to moderate disease (<50% nail involvement) with no matrix involvement
  - Ciclopirox
  - Efinaconazole
  - Tavaborole
- Established and severe disease
  - Terbinafine – preferred
    - 250 mg orally once a day for 6 weeks for fingernails and 12 weeks for toenails
    - Measure transaminases (and maybe CBC) before initiating therapy, no repeat testing in healthy <65 yo pts
  - Itraconazole
    - 200 mg per day for 12 weeks for toenails
    - 200 mg twice a day for 1 week with second “pulse” 3 weeks later for fingernails

Devices to Treat Nail Fungus

- Laser
- Drilling
- Photodynamic therapy
- Plasma therapy

12 yo AA male patient presents for evaluation of the following skin lesions.

- 4-week duration, non-pruritic, tan to fawn colored macules and patches that coincided with summer sports activities and increased perspiration

Image source: https://adc.bmj.com/content/96/4/392

Pityriasis Versicolor – Diagnostic Pearls

- Superficial fungal infection caused by *Malassezia* species of yeast in stratum corneum
- Flourishes in hot and humid environments
- Increased sebum production facilitates growth

- Hyper or hypo pigmented circles or ovals with fine scale
  - Evoked scale sign
- Trunk, neck and upper arms
- KOH
  - Sticks and stones
  - Spaghetti and meatballs
- Wood's light
  - Greenish-yellow fluorescence

Pityriasis Versicolor – Treatment

- Topical treatments effective and well-tolerated
  - Shampoos and lotions – apply to affected area for 5-10 minutes then wash off, twice a day for 7-14 days, then once a month
    - Zinc pyrithione
    - Selenium sulfide
    - Ketaconazole
- May take considerable time and maintenance
- Recalcitrant or recurring consider oral therapy
  - Fluconazole 300 mg weekly for 2-4 weeks
  - NOT terbinafine
  - NOT ketaconazole

18 yo female cross country runner presents to Urgent Care for evaluation of a diffuse and pruritic rash

- It began on the forearms 3-4 days ago as shown several hours after taking a run with her dog on a wooded trail, but has since spread to the face, neck and torso.

- The patient denies exposure to any new products, foods, or any change in her routine.

http://www.pictureof .com/wp-content/uploads/2013/04/ rash-neck.jpg

http://aboutdermatology.com/skin/skin-common-conditions

Dermatitis – Irritant and Allergic

- Delayed, Type IV hypersensitivity immunologic reaction
- Risk factors
  - Occupational exposures – health professionals, chemical industry, beauticians/hairdressers, machinists, construction workers
  - Adults most typically affected
  - Comorbidities – atopic dermatitis

ACD/ICD

- Intensely pruritic rash
- Papular, vesicular, bullae
- Pattern of exposure of allergen
  - Linear – poison ivy
  - Round – buttons, earrings

Allergic Contact Dermatitis Treatment

- Epicutaneous patch testing if unsure of source or need confirmation
- Avoidance
- Medium to high-potency topical corticosteroids
- Topical emollients
- Cool compresses or oatmeal baths
- Systemic corticosteroids if moderate to severe
  - Especially important in plant-derived etiology as rebound dermatitis is common (may need 2-3 weeks of steroid with taper)

Fonacier L et al. Contact Dermatitis: A Practice Parameter-Update 2015. American Academy of Allery, Asthma & Immunology, 2015.

Avoidance

- 2 computer-generated databases available in US
- List products that are free of the suspected allergens
  - Contact Allergen Management Program/CAMP – American Contact Dermatitis Society https://www.contactderm.org/
  - Mayo Clinic's SkinSAFE Database https://www.skinsafeproducts.com/

Avoidance

- Nickel spot test – dimethyl-glyoxime test

6-month-old male with a facial and body rash for the past several weeks, seems itchy, not sleeping well at night, both parents with seasonal allergies, just began solid food supplementation to breast feeding

Atopic Dermatitis

- Intermittent or persistent course
- Onset most common by 5 years of age
- ~5-20% of school-aged children
- ~10% of adults

Hebert AA. *J Manag Care Med*. 2018;21:47-51.
Images from: https://www.dermnetnz.org/topics/atopic-eczema/

Atopic Dermatitis Diagnosis

Essential Features [must be present]

- Pruritus
- Eczema (acute, subacute, chronic)
  - Typical morphology and age-specific patterns
    - Facial, neck, and extensor involvement in infants/children
    - Current or previous flexural lesions in any age group
    - Sparing the groin and axillary regions
  - Chronic or relapsing history

Important Features [adds support to diagnosis]

- Early age of onset
- Atopy
  - Personal and/or family history
  - IgE reactivity
- Xerosis

Eichenfield LF, et al. *J Am Acad Dermatol*. 2014;70:338-351.

Basic Management

- Skin care: moisturizers, warm baths, antiseptic measures
- Anti-inflammatory agents
  - Topical corticosteroids (TCS)
    - Overall good safety profile
    - Potential side effects: purpura, telangiectasia, striae, focal hypertrichosis, skin atrophy; systemic exposure
  - Topical phosphodiesterase inhibitor – crisaborole 2% ointment
  - Topical calcineurin inhibitors (TCI)

    Tacrolimus (0.03%, 0.1%); pimecrolimus (1%)
    - No risk for cutaneous atrophy
    - Potential side effects: local reactions (stinging and burning)
    - Black box warning, long-term safety not established (malignancy?)

Eichenfield LF, et al. *J Am Acad Dermatol*. 2014;71:116-32.

A 34-year-old woman has longstanding AD

- She is in your clinic today for an acute worsening of her disease over the past week
  - She has had increased pruritus and now has multiple painful areas within the involved skin
  - She always bathes with gentle cleansers, and has been applying petrolatum jelly and TCS (triamcinolone acetonide, 0.1% ointment) without improvement

Image from: https://www.dermnetnz.org

Secondary S. aureus Infections in AD

- Common complication in patients with AD
- **Purulent exudate and pustules on skin examination** may suggest a diagnosis of secondary bacterial infection over inflammation from dermatitis
- Systemic antibiotics ARE appropriate with clinical evidence of bacterial infection in patients with AD, in addition to standard treatments including TCS

Sidbury R, et al. *J Am Acad Dermatol*. 2014;71:327-349.
Nakatsuji T, et al. *Sci Transl Med*. 2017;22:9(378).

Step-Care Management of AD

	Non-lesional	Mild	Moderate	Severe
Maintenance Treatment	**BASIC MANAGEMENT** **Skin Care** • Moisturizer, liberal and frequent (petrolatum-based moisturizer) • Warm baths or showers using non-soap cleansers, usually once daily and followed by a moisturizer (even on clean areas) **Trigger Avoidance** • Proven allergens and common irritants (eg, soaps, wool, temperature extremes) • Consider comorbidities	**BASIC MANAGEMENT** **Skin Care** • Moisturizer, liberal and frequent (choice per patient preference) • Warm baths or showers, usually once daily and followed by moisturizer (even on clear areas) **Antiseptic Measures** • Dilute bleach bath (or equivalent) ≤x/week according to severity (especially with recurrent infections) • Antibiotics, if needed **Trigger Avoidance** • Proven allergens and common irritants (eg, soaps, wool temperature extremes) • Consider comorbidities	**BASIC MANAGEMENT + TOPICAL ANTI-INFLAMMATORY MEDICATION** *Apply of areas of previous or potential symptoms (aka flare)* ***Maintenance TCS*** • *Low potency 1x-2x daily (including face)* • *Medium potency 1x-2x weekly (except face)* **OR Maintenance TCI (pimecrolimus, tacrolimus)** • 1x-2x daily • 2x-3x weekly (not an indicated dosage) **OR Crisaborole 2%[1]** • 2x daily	**BASIC MANAGEMENT + *REFERRAL to AD Specialist*** **Phototherapy** **Dupilumab[2]** **Systemic Immunosuppressants** • Cyclosporine A[3] • Methotrexate[3] • Mycophenolate mofetil[3] • Azathioprine[3] • Coticosteroids[4] **Consider acute tx for some patients to help gain control:** • Wet wrap therapy • Short-term hospitalization
Acute Treatment	**Apply TCS to Inflamed Skin** Low to medium potency TCS 2x daily for 3-7 days beyond clearance [Consider TCI, crisaborole]	**Apply TCS to Inflamed Skin** Medium to high potency TCS 2x daily for 3-7 days beyond clearance [Consider TCI, crisaborole] **If not Resolved in 7 Days, Consider** → • Non-adherence • Infection • Misdiagnosis • Contact allergy to medications • Referral		

[1]For patients ≥ 2 yrs with mild to moderate AD
[2]For patients at least 12 yrs with moderate to severe AD
[3]Not FDA approved for AD
[4]Not recommended for long-term maintenance

Adapted from Boguniewicz M, et al. *Ann Allergy Asthma Immunol.* 2018;120:10-22.

Other Treatments

- Oral Antihistamines
  - Short-term, intermittent use for sleep loss secondary to pruritus
  - Use in conjunction with topical therapies
- Phototherapy
  - Second Line
  - Can be used as maintenance therapy in those with chronic disease
  - NB-UVB
  - BB-UVB
  - PUVA
  - UVAB
- Dupilimab

Sidbury R, et al. *J Am Acad Dermatol*. 2014;71:327-349.

Atopic Dermatitis Action Plan

Patient Name: _____

Date: _____

Use your action plan as a guide for how your health care team wants you to manage your AD, and what to do when your condition changes

	Mild Signs/Symptoms	Moderate Signs/Symptoms	Severe Signs/Symptoms
Bathing or showering			
Daily skin-care routine			
Symptom management			
Additional information			
Support strategies			

A 46-year-old female presents with a 3-4 year history of this facial rash comprised of redness and flaking with minimal if any itching. It worsens in the winter and shows improvement in spring and early fall, and has not improved with the use of facial moisturizer. She denies exacerbation with sun, wind, or alcohol use. Her PMH is significant for unipolar major depression with seasonal exacerbation that is well managed with sertraline 50 mg daily.

http://noskinproblems.com/ -on-face/
http://www.facialandwaxing.com/ dermatitis/

Distinguishing this Dermatitis: Seborrheic Dermatitis

- Inflammatory response to *Malassezia* yeast which lives on lipid-rich sebaceous gland secretions
- Commonly affects 3 different groups of patients – first 3 months, puberty, 40-60 years
- At-risk patients: immunosuppression (HIV), neurological conditions (Parkinson), psychiatric diseases, genetics
- Lesions: erythematous patches with greasy scales or flaking, in darker skin it can present as hypopigmentation
- Distribution: scalp, hairline, eyebrows/lashes, central face, nasolabial folds, EAC, behind the ear

Dealing with this Dermatitis: Seborrheic Dermatitis

- Treatment: topical corticosteroids (desonide), topical calcineurin inhibitors (pimecrolimus), topical lithium, topical antifungals (ciclopirox, ketoconazole)

Differential Diagnosis: Dermatologic “Must-Not-Misses” and COVID-19 Clues

Clues to Life-Threatening Rashes

- Mucous membrane involvement
- Extensive blisters or peeling of skin
- Extensive erythema and fever
- Pain out of proportion to exam
- Altered LOC
- Petechial or purpuric lesions

Generalized Rashes That Could Be Life-Threatening

- Infectious
  - RMSF
  - Meningococcemia
  - Toxic Shock Syndrome/SSSS
  - Necrotizing fasciitis
- Hypersensitivity Reactions
  - Type I: Urticaria, angioedema, anaphylaxis
  - Steven-Johnson syndrome
  - Toxic epidermal necrolysis

COVID-19 Dermatologic Clues

https://www-visualdx-com.mwu.idm.oclc.org/visualdx/diagnosis/covid-19?moduleId=101&diagnosisId=56622#&gid=1&pid=71

A Few Good and Practical Resources

- Images – http://www.dermnetnz.org
- VisualDx – skin of color atlas
  https://www.visualdx.com/
- Global Skin Atlas
  http://www.globalskinatlas.com/searchdiag.cfm
- Fitzpatrick's Color Atlas & Synopsis of Clinical Dermatology
  - Wolff K, Johnson RA, McGraw Hill
- Clinical Dermatology, 5th Ed – online and print
  - Habif T, Mosby

Selected References/Resources

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