Inflammatory Skin Diseases When It's Not Psoriasis or Eczema

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Conflict of Interest Disclosure

• None for this lecture for either faculty

“Inflammatory” Skin Disease

• What does that mean?
• Something is collecting in the skin, usually around or affecting blood vessels, causing some visible sign of inflammation: erythema; May also cause symptoms: itch, pain
• In the most elementary way of thinking about this, central question: WHAT accumulates?
• Lymphocytes, PMNs or granuloma formation

Exfoliative Dermatitis

Exfoliative Erythroderma

• Acute onset: Skin surface: red, scaly, itchy
• Any age, either gender; mostly in adults
• DDx: cutaneous T-cell lymphoma, psoriasis, pityriasis rubra pilaris, ichthyosis
• Dx: Clinical exam and biopsy
• There may be a specific cause!

<table>
<thead>
<tr>
<th>Pre-existing skin disease</th>
<th>50%</th>
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<tbody>
<tr>
<td>Drug reaction</td>
<td>10%</td>
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<td>Malignancy (occult)</td>
<td>10%</td>
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<tr>
<td>Idiopathic</td>
<td>30%</td>
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</table>
Complications and Therapy

- Complications: Dehydration, Protein loss and High output CHF, Local infection and Septicemia, Thermal dysregulation, Late: Nail shedding
- Therapy: Hospitalize; Space heater, Fluid and electrolyte balance, emollient, topical corticosteroid under wet wraps, ? use of systemic corticosteroids (increase risk infection or worsen underlying disease)
- Therapy: Identify any underlying cause

Perils, Pitfalls and Pearls

- Initial evaluation may not always disclose the reason for exfoliative erythroderma
- May need to re-examine and reassess over months to even years, especially with occult malignancy

Necrobiosis Lipoidica (Diabeticorum)

- Adult disorder with F:M ratio = 3:1
- Yellow-brown atrophic plaques, often with surface telangiectasia, on pretibial forelegs and dorsal foot
- Bilateral symmetry; Typically ASx; 35% ulcerate: lesions tender/painful
- ~80% have diabetes or abnormal glucose tolerance testing, but only 0.03% of diabetics develop NLD; As a sign of diabetes: specific but not very sensitive
- Pathogenesis unknown
- DDx: GA, sarcoid, stasis, diabetic dermopathy
NLD: Therapy

- Diabetic control does not alter course
- Only 17% spontaneous remit, but only after ≥ 10 years duration
- Potent topical steroids and IL steroid injection at lesion periphery is standard Rx
- Oral pentoxifylline (300mg TID), niacinamide (500mg TID), mycophenolate (500mg BID-QID), cyclosporine (ulcerated, at 4mg/kg/day), ticlopidine, clopidogrel, PUVA, UVA-1, PDT, TCIs topical or systemic
- Excision to fascia with skin graft placed

Perils, Pitfalls and Pearls

- NLD in diabetes may be a sign of high risk for associated neuropathy and retinopathy
- NLD may co-exist with granuloma annulare (many overlapping feature)

Granuloma Annulare

- Disease of the young, including children
- 2/3 are under age 30; F:M ratio = 2:1
- Pathogenesis unknown; hypersensitivity to uncertain antigen?, primary degeneration of elastic tissue?
- Skin-colored to pink, arciform or annular, plaques
- 80% located on the extremities
- VARIANTS: Generalized (up to 15%), Perforating papular (5%), Subcutaneous (5%)

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Granuloma Annulare

GA: Therapy
- High potency topical steroids + occlusion
- IL steroid injections
- Topical calcineurin inhibitors
- Trauma and scarification
- PUVA and UVA-1
- Dapsone
- Isotretinoin
- Cyclosporine
- Anti-TNF-alfa drugs

Perils, Pitfalls and Pearls
- Generalized GA associated with known or undiagnosed diabetes mellitus (~20%)
- Atypical (painful, palms/soles) GA may be paraneoplastic (solid tumors and lymphoma)
- Atypical GA associated with HIV infection
- Generalized GA: Chlorambucil 1-6mg daily (Note: Check CBC during therapy)

Sarcoid

Sarcoidosis
- Systemic granulomatous disease, likely represents hypersensitivity to some antigen
- Multisystem: skin, lungs, bones/joints, eyes, lacrimal glands, but almost any organ system can be affected
- Women > Men 2:1; Black > White 10-20:1
- Young adults; rarely pediatric disease
- Classic lesion: ASx firm plaques around facial orifices (lupus pernio); red-purple
- Variable: ulcers, ichthyosis, micro-papules, subcutaneous nodules, annular lesions, psoriasis-like, verrucous plaques
### Sarcoid Therapy

- **STANDARD**
  - Antimalarial drugs
  - Methotrexate
  - Steroids (PO, IL, Topical)
- **COMMON**
  - TNF-alfa inhibitors
- **POPULAR**
  - Minocycline
  - (Tetracycline)
- **ALTERNATIVE**
  - Thalidomide
  - Pentoxifylline
  - Isotretinoin
  - Lefunomide

*NOTHING IS GUARANTEED*

### Perils, Pitfalls and Pearls

- May help verify diagnosis by checking Angiotensin converting enzyme level (ACE elevated)
- Check for hypercalcemia
- Check for hypergammaglobulinemia
- **ALL treatment is suppressive, not curative; Stop Rx: recurrence likely**
- Exhaustive Rx reviews:
  - Doherty & Rosen *Drugs* 68:1361, 2008
  - Badgwell & Rosen *JAAD* 56:69, 2007

### Pityriasis Rosea

- **The “Herald Patch”**
  - Acute onset, self-limited papulosquamous eruption of younger individuals (ages 10-35)
  - Lasts 4-14 weeks before resolution
  - Prodrome, clustering, single episode all point to virus, but precise etiology unknown
  - Prodrome: H/A, fever, malaise, arthralgia
  - Herald patch: large ovoid, scaling patch
  - Generalized eruption: smaller versions of herald patch on trunk, upper extremities; slight scale and pink color; follow cleavage lines; Slight itching
Pityriasis Rosea: Therapy

- None: will go away on its own
- For very itchy patient: topical low to mid-potency steroids and BB-UVB or NB-UVB (sun, tanning bad, specific phototherapy unit)

Perils, Pitfalls and Pearls

- PR is Papular in skin of color
- Phototherapy contraindicated in skin of color: leads to post-inflammatory dyschromia
- R/O Secondary syphilis in those with risk factors (young, multiple partners, unprotected sex, adenopathy)

Leukocytoclastic Vasculitis

- LCV = “Palpable purpura”
- Neutrophilic vasculitis; nonblanching purpura due to RBC leakage from damaged blood vessels (post-capillary venules)
- M=F; all ages (90% adult and 10% children)
- Favors dependent areas and under tight fitting clothing
- Fever, anorexia, arthralgia/myalgia common
- 90% resolve weeks to months

Leukocytoclastic vasculitis

Leukocytoclastic Vasculitis

- IgA deposition: Children (ages 4-7), with associated arthralgia, abdominal pain, follows URI = Henoch Shonlein purpura
Leukocytoclastic Vasculitis

- May be due to variety of underlying causes:
  - 15% Infection: bacterial (Strep, TB), viral (HCV)
  - 15% Inflammation: SLE, RA, IBD
  - 20% Drugs: Antibiotics, NSAIDs, ACE inhibitors, Beta-blockers, Thiazides, Phenytoin
  - 5% Neoplasms: Myeloma, Lymphoma, Leukemia
  - 1% Genetic disorders; Familial Mediterranean Fever
  - 45% Idiopathic
  - Seek underlying factors and treat, if found

Leukocytoclastic Vasculitis Rx

- Symptomatic and supportive
- Corticosteroids 1-2mg/kg/day
- Dapsone up to 200mg/day
- Colchicine 0.6mg TID
- Azathioprine 2mg/kg/day (up to 200mg daily)
- Methotrexate 10-30mg/week
- Combination therapy

Perils, Pitfalls and Pearls

- Check for cryoglobulins and ANCA, as similar morphology diseases can occur
- Check CXR if cough or pulmonary SX and check urinalysis if severe skin disease. LCV can cause deadly hemorrhage in lungs and kidneys; this WILL require hospital stay and systemic steroids.

Seborrheic Dermatitis

What is it:
- Common, relatively mild skin disorder
Who gets it:
- Infantile and adult forms
Clinical:
- Sharply demarcated thin plaques or patches
- Usually pink erythema
- Few symptoms, maybe mild itching
- Pigmentary changes in dark skin
- Associated with Malassezia furfur, skin lipids and sebaceous glands
Seborrheic Dermatitis

Treatment
- Emollients
- Ketoconazole cream
- Low potency topical corticosteroids
- Zinc pyrithione
- Calcineurin inhibitors

Parapsoriasis

Who gets it
- Adults

What is it:
- A chronic idiopathic papulosquamous dermatosis of somewhat variable morphology
  - Small plaque parapsoriasis
  - Large plaque parapsoriasis

How do you treat:
- Close follow-up
- Repeat biopsies, particularly if morphology changes
- Symptomatic: topical corticosteroids, tar, phototherapy
- More aggressive for LPP

Parapsoriasis

Clinical
- Chronic, mildly pruritic
- Wax and wane early, then become persistent
- Watch for induration and plaque formation
- Biopsy, biopsy, biopsy!
- LPP may be MF
- SPP may not

Perils, Pitfalls, Pearls

DDX – Pitfall: May be hard to diagnose
- Mycosis fungoides
- Psoriasis
- Drug eruptions
- Pityriasis rosea
- Nummular dermatitis
- Secondary syphilis
- Poikilodermatous conditions
**Mycosis Fungoides**

**What is it:**
- The most common type of CTCL
- 50% of all primary cutaneous lymphomas

**Who gets it:**
- Older adults, average age 55-60 at diagnosis

**Clinical:**
- Classical progression from patch to plaque then to tumor stage over years or decades
- Extracutaneous dissemination not likely in patch and early plaque stage
- Most likely in tumor stage or erythroderma
- Lymph nodes

**Treatment:**
- Topical: Nitrogen mustard or Carmustine (BCNU)
- Total skin electron beam
- PUVA (BB-UVB, NB-UVB)
- Systemic chemotherapy (CHOP, and others)
- Interferons
- Retinoid (Bexarotene)
- Combinations

**Perils, Pitfalls, and Pearls**
- DDx is extensive!
- Benign dermatoses: atopic dermatitis, psoriasis, drug eruptions, large plaque parapsoriasis, dermatophytosis,
- Other types of epidermotropic CTCL
- Main Pitfall: Patients need to be followed over time with multiple biopsies to prove diagnosis!

**Pityriasis Rubra Pilaris**
**Pityriasis Rubra Pilaris**

What is it:
- Papulosquamous disease of unknown cause

Who gets it:
- M = F
- Childhood and adult form
- Most acquired, rare familial

**Clinical:**
- Rough hyperkeratosis follicular papules
- Large salmon colored plaques
- Distinctive "islands of sparing"
- Orange waxy palmar keratoderma

**How do you treat it:**
- Retinoids
- Methotrexate
- Topical vitamin D analogues
- Immunosuppressives
- Corticosteroids
- ?Phototherapy
- Spontaneous remission

**Perils, Pitfalls, Pearls**

DDX and Pitfalls
- Psoriasis
- Other causes of exfoliative erythroderma
- Seborrheic dermatitis
- Kawasaki disease (children)
- Don't be aggressive in children

**Lichen Planus**

What is it:
- Idiopathic inflammatory skin disease (hair, nails, and mucous membranes)
- T-cell mediated, but to unknown antigen

Who gets it:
- Middle-aged adults average 52
- M = F
**Lichen Planus**

**Clinical:**
- Small flat-topped violaceous papules individually or in plaques
- Koebner phenomenon
- Flexor surfaces of wrists
- Forearms, dorsal hands
- Lower legs and feet
- Mucous membrane in > ½ of patients
- Hypertrophic lesions

**Clinical variants:**
- Actinic
- Annular
- Atrophic
- Bullous
- Hypertrophic
- Linear
- Drug-induced
- Nail
- Oral
- LE-LP

**Treatment**
- Corticosteroids: topical, intralesional, systemic
- PUVA
- Cyclosporin
- Acetretin, griseofulvin
- Calcineurin inhibitors

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**Exanthematous Drug Eruptions**

**What are they:**
- The most common cutaneous adverse drug reaction
- "Maculopapular rash"
- Probably immunologic

**Who gets them:**
- Anyone, especially on multiple drugs

**Clinical:**
- Begins 7 to 14 days after start of new medication
- Erythematous macules
- May be slightly palpable or urticarial
- Become confluent, polymorphous and morbilliform
- May have a purpuric component on feet
Exanthematous Drug Eruptions

Treatment:
- Discontinue offending agent if possible
- “Treat through”
- Topical corticosteroids
- Antihistamines
- Rarely systemic corticosteroids

Perils, Pitfalls and Pearls

DDX and Pitfalls:
- Viral exanthems
- Early Stevens-Johnson
- Often frustrating
- Time is your friend!