Hear from the Experts – Challenges in Managing Patients with Inflammatory Dermatoses

Melodie Young, NP
Brian Berman, MD, PhD
David Cohen, MD
Mark Lebwohl, MD
David Pariser, MD

Topical Corticosteroid NoNo’s

Strep infection in a stable PsO patient

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Melodie Young, NP

Tip 1

David E. Cohen, M.D., M.P.H.
Charles and Dorothea Harris Professor and Vice Chairman for Clinical Affairs
Director of Allergic, Occupational and Environmental Dermatology
New York University School of Medicine
Ronald O Perelman Department of Dermatology

No Relevant Conflicts of Interest
• 18.4% of the male and 74.9% of the female respondents had at some point dyed their hair.
• The median age at first hair dyeing was 16 years (range 1–80).

**para-phenylenediamine**

The primary intermediate in permanent hair dyes and fur dyes.

- p-phenylenediamine (PPD) and/or toluene-2,5-diamine (PTD) – common permanent dye sensitizers.
- ME-PPD provides excellent hair coloring performance
- Potential 100 fold lower than the allergy induction threshold
- Allergy Alert test showed 70% tolerance in PPD allergic patients
- 43 PPD/PTD+ were Allergy alert tested and then allowed to color their hair for a year.
- 38/43 PPD/PTD allergic individuals did not develop an elicitation reaction during the pre-test
- 29/38 tolerated ongoing hair dying with ME-PPD

**Age-related sensitization to p-phenylenediamine**

US-FDA had 6 cases were deemed life-threatening and 3 required hospitalization.


**2-methoxymethyl-p-phenylenediamine (ME-PPD)**

hair dye in PPD allergic individuals.

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**Tip : Metal Spot Tests**

Nickel

**Cobalt**

α-nitroso-β-naphthol- disulfonic acid
Tinea Corporis
- Don’t get fooled by hyperpigmentation or less perceptible erythema
- Advancing scaly border

Tinea Faceii
- May be overt or subtle

Tinea Versicolor
Subtle pigmentation changes, erythema not as prominent but usually scale

Tinea Capitis
- Mild with just scaling
- Florid with deeper follicle destruction and scarring alopecia

Challenges in Managing Patients with Inflammatory and Infectious Dermatoses in Skin of Color:

David Pariser, MD
Private Practice
Professor, Department of Dermatology
Eastern Virginia Medical School
Norfolk, Virginia
Psoriasis

Erythema may be difficult to evaluate
Secondary changes such as hyperpigmentation may be more prominent

Sezary Syndrome

May present as exfoliative erythroderma
Skin infiltration prominent

Lichen Planus

Hear from the Experts – Challenges in Managing Patients with Inflammatory Dermatoses
Brian Berman, MD

What’s New to Treat Itch
Brian Berman, M.D., Ph.D.
Professor Emeritus, Dermatology and Dermatologic Surgery, Univ. of Miami
Co-Director, Center for Clinical and Cosmetic Research, Aventura FL

Disclosures
Brian Berman, M.D., Ph.D.

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Off FDA labeled usages are discussed
Itch:
Treatment with Hypochlorous Acid Gel

National Ambulatory Medical Care Survey (NAMCS) 2000-2009
US Outpatient Visits based on ICD-9 Codes

<table>
<thead>
<tr>
<th>Prrigio Nodularis</th>
<th>Total Visits '00-'09</th>
<th>% by Dermatologist</th>
<th>% by Others</th>
<th>Total visits/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pruritus NOS</td>
<td>9,990,378</td>
<td>50.8</td>
<td>49.2</td>
<td>1,163,923</td>
</tr>
</tbody>
</table>

Point-prevalence of chronic pruritus (>6wks) around 13.5% in the general adult population

Hypochlorous Acid - HOCl

➢ in vivo: Naturally generated during immune responses in activated neutrophils by myeloperoxidase-mediated peroxidation of chloride ions

Mechanisms of Anti-Inflammatory Activity of HOCl

- HOCl adds one or more Cl ions to the NH2 group of histamine
- Histamine-N-chloramine is less active
- Oxidation by HOCl of thiol or thio-ether groups directly decreases the activity of:
  - Leukotrienes released by neutrophils i.e LTB4
  - IL-6
  - TGF-β
  - Proteases, gelatinases, collagenases
- Oxidation of alpha2-macroglobulin increases neutralization of
  - β-NGF
  - IL-6, IL-2
  - TGF-β

Effect of Treatment with HOCl Gel x3 days on Itch in Atopic Dermatitis

Mean % Change in Itch VAS With and Without Treatment with HOCl Gel x 3 days

Better Mean % ITCH* Worse

* (Day 3 VAS - Day 1 VAS) / Day 1) / n X 100%

Fisher Exact Test for Less and Worse Itch distributions p=0.009

Better Mean % ITCH* Worse

Berman, B. et al: Fall Clinical Derm 2013, Poster

"Risk" for the treated group having less itch is 6.5x vs the untreated group

p = 0.007
Substance P, the endogenous ligand for NK-1 receptor, is a key pruritogenic factor in atopic dermatitis:

- Promotes the production of NGF from keratinocytes
- Release of histamine and leukotrienes and/or TNF from mast cells
- Contributes to sensory nerve fiber sprouting & augments skin inflammation

- Substance P is a marker of AD disease activity
  - Increased plasma levels of SP correlate with disease severity

**Aprepitant as an Anti-Itch Treatment**

- In humans, the neurokinin-1-receptor antagonist **aprepitant**
- Almost completely controlled severe and treatment-refractory itch in three patients with Sézary Syndrome
- Successfully inhibited chronic itch in 20 patients with atopic diathesis, prurigo nodularis, and pruritus of systemic origin

**Aprepitant as an Anti-Pruritic Agent**

- Aprepitant for management of severe pruritus related to biological cancer treatments: a pilot study (Lerner 2011, Lerner-Dean)
  - Single-group prospective study, n=45 patients (refractory group = naïve group)
    - One-week treatment duration; 15mg/day on 1, 8mg on day 2 only
    - Primary endpoint: change in mean VAS score
      - Results: Treated group 7-point reduction (p=0.0095), naïve group 8-point reduction; 71% responded (95% reduction); 41% Pristinomycin level in 1/4 of pts
- Additional references:
  - Aprepitant as an antipruritic agent (Duwe 2009, N Engl J Med)
  - Aprepitant Evidence of its effectiveness in patients with refractory pruritus continues (Benn 2012, Am Acad Dermatol)
  - Oral aprepitant is highly effective in the therapy of refractory pruritus in systemic lupus erythematosus (Benn 2010, Br J Dermatol)
  - Aprepitant agent pruritus in patients with solid tumors (Vanier 2011, Support Clin Genet)
  - Aprepitant for refractory-induced pruritus (Fournier 2015, N Engl J Med)
  - Aprepitant for management of severe pruritus related to biological cancer treatments: a pilot study (Lerner 2011, Lerner-Dean)

**Pentoxifylline for Pruritus in Prurigo Nodularis**

- 11 patients with HIV and recalcitrant PPE / prurigo nodularis were treated with pentoxifylline 400 mg/day OD-TID x 8 wks
- 10/11 patients had less pruritus and average degree of pruritus was significantly reduced (p = 0.0009) from 6.5 at baseline VAS assessment to 3.6 at the end of the 8 week study
- Global assessment of lesions decreased from baseline in most patients and increased slightly in one patient

**Hear from the Experts – Challenges in Managing Patients with Inflammatory Dermatoses**

Mark Lebwohl, MD
Dose Optimization:
62 yo obese ♀ psoriasis 70% BSA, and PsA

- Failed NB UVB
- Failed NB UVB + acitretin
- MTX → ↑LFT's
- Started adalimumab 40 sq qow
  → negligible improvement by w. 4

Pharmacokinetic Modeling
80mg vs. 40mg at Day 0

Adalimumab in Psoriasis: Phase II
Mean % PASI Improvement

Tip #2

70 yo ♂, Psoriasis 15% BSA & PSA

- Prescribe apremilast

National Psoriasis Foundation
Leah McCormick Howard
Health Policy Manager
Lhoward@psoriasis.org
(503) 546-5553