Improving Management Strategies & Patient Adherence in the Treatment of Psoriasis

Steven R. Feldman, MD, PhD
Professor of Dermatology, Pathology & Public Health Sciences
Director, Psoriasis Treatment Center
Wake Forest University
School of Medicine
Winston-Salem, North Carolina
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• Owner of www.DrScore.com
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Objectives

• Analyze the latest clinical data on current & emerging therapeutic options, including biologics, for psoriasis
• Identify guideline recommendations for early screening, diagnosis, & treatment selections for patients with psoriasis
• Discuss emerging options/new treatment targets in patients who do not respond to traditional therapies
• Explore the pathogenesis of psoriasis and how this relates to current and emerging biologic therapies
• Explore the burden of psoriasis & the impact that under-treatment & nonadherence has on comorbidities, quality of life & productivity
Categorization of Psoriasis

- **Localized disease**
  - Topical treatments

- **Generalized disease**
  - Phototherapy
  - Systemic therapy
Psoriasis vs Other Conditions

- Reduction in quality of life comparable to other medical diseases
Severe Psoriasis and Myocardial Infarction

• Most impactful publication in my dermatology lifetime

Gelfand JM et al JAMA. 2006;296:1735-1741
Immunopathology of Psoriasis

CCL: chemokine (C-C motif) ligand; CXCL: chemokine (C-X-C motif) ligand; IFN: interferon; IL: interleukin; NKT: natural killer T cell; Th: T helper; TNF: tumor necrosis factor.
Psoriasis

- AAD guideline

Steve’s Standard Model

Psoriasis

Psychosocial

Joint Symptoms

Topicals

Promote good adherence

Localized?

Yes

No

Phototherapy

Ibuprofen

Methotrexate

Biologics (which one?)

Psoriasis Foundation

Rheumatology
Efficacy of Systemic Treatments for Psoriasis

Patients Achieving PASI-75 at Week 12
Secukinumab vs Ustekinumab

Secukinumab vs Ustekinumab

Ixekizumab PASI90 Scores

Ixekizumab PASI75 vs Comparator

**Figure 2:** Proportion of patients achieving PASI75 from baseline through to week 12 in UNCOVER-2 (A) and UNCOVER-3 (B).

Percentages for each timepoint are color coded by treatment group, except for 0 values which are not labelled. PASI = psoriasis area and severity index score.

Lebwohl M et al. Phase 3 Studies Comparing Brodalumab with Ustekinumab in Psoriasis.
Rates of Serious Infections per 100 Patient-Years

N = number of serious infections per treatment group

Low Hanging Fruit

• We have treatments that are remarkably effective
• Patients don’t always get better
• Do we need new treatments or just new ways to get patients to use the existing (often generic) treatment?
Adherence Definitions

Three Big Reasons for Poor Treatment Outcome

1. Poor Compliance
2. Poor Compliance
3. Poor Compliance

In an anonymous survey of psoriasis patients, 40% report noncompliance!!

Real Patients: Primary Nonadherence

- Many patients don’t even fill the prescription
- Psoriasis patients are among the worst

Secondary Nonadherence
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Electronic/Self-Reported Adherence

Mean Daily Adherence

\[ y = -0.0009x + 0.9293 \]
\[ R^2 = 0.0561 \]

\[ y = -0.0056x + 0.7439 \]
\[ R^2 = 0.6457 \]

Slope~=~20%/5 weeks

Tachyphylaxis

TNF-Inhibitor Treatment Retention

Dupan SM, Arthritis & Rheumatism (Arthritis Care & Research) 2009; 61: 560–568
Atopic Dermatitis Adherence is Worse

\[ y = -0.0013x + 0.3783 \]

\[ R^2 = 0.0294 \]

Why Are Patients Non-Adherent

<table>
<thead>
<tr>
<th>Poor motivation</th>
<th>The patient may not be particularly bothered.</th>
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<tr>
<td>Secondary gain</td>
<td>Seeking disability or other gain</td>
</tr>
<tr>
<td>Lack of trust in doctor</td>
<td>Physician-patient relationship is the foundation</td>
</tr>
<tr>
<td>Fear of medication</td>
<td>Founded or unfounded fear of treatment.</td>
</tr>
<tr>
<td>Don’t know what to do</td>
<td>Patients may not remember oral instructions</td>
</tr>
<tr>
<td>Burden of treatment</td>
<td>Sometimes the tx is worse than the disease!</td>
</tr>
<tr>
<td>Perceived burden</td>
<td>Sometimes tx seems worse than the disease.</td>
</tr>
<tr>
<td>Passing the responsibility buck</td>
<td>With multiple caregivers, no one may take responsibility</td>
</tr>
<tr>
<td>Forgetfulness</td>
<td>“Pavlov’s dog” problem</td>
</tr>
<tr>
<td>Laziness</td>
<td>No energy to follow treatment.</td>
</tr>
<tr>
<td>Resignation</td>
<td>Some patients have just given up</td>
</tr>
</tbody>
</table>
We Can Encourage Better Compliance

• Establish a relationship with patients
• Involve patients in treatment planning
  – Make it easy!
• Don’t scare patients with side effects
• Choose fast acting agents
• See patients back for a return visit
• Give clear, written instructions
Patients Want Caring Doctors


Fig. 1. Relationship between patients’ perception of their doctor’s friendliness and caring attitude and patients’ overall satisfaction.
Choose a vehicle that the patient will use

- Less messy products seem to be preferred over:
  - Ointment
  - Cream
  - Emollient
  - Gel

Primary Non-Adherence with Complex Regimens

- Overall primary non-adherence in acne: 27%

Anderson K et al. JAMA Dermatol. 2015;151:623-6
Simplify Treatment

Median Adherence Over Time

Percent Adherence vs Week of Study
Add a One Week Return Visit

- Kids with atopic dermatitis
- 0.1% tacrolimus ointment BID
- Return in 4 weeks or 1 week/4 weeks

Betamethasone/Calcipotriene Consistent Results

Why did one study, in green, have worse result at 2 weeks?
Example: Piano Lessons

• “Here is your sheet music; recital in 8-12 weeks”
  - Piano lessons once a week – great recital
  - No weekly lessons – not such a good recital
Suggestions to Promote Adherence

• COPE
  – Connectedness/collaboration, Open-ended questions, Positive attitude, Encourage support

• Schedule return visits
  – Patients more likely to fill the prescription
  – Patients more likely to take medications

• Focus on initial adherence
  – Promotes positive habits
  – Supports compliance

• Provide patients with your cell phone number
  – Encourages communication
  – Shows that you are invested in their well-being

Curse of Knowledge

- Better informed people find it difficult to think from the perspective of less well-informed people
- Makes it hard to meet patients’ education needs
Table II. Patient knowledge about basic drug information, satisfaction with the consultation, and worries about adverse effects 2 weeks after a consultation according to a questionnaire, n=17.

<table>
<thead>
<tr>
<th>Patient knowledge and opinion</th>
<th>n</th>
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<tr>
<td>Diagnosis</td>
<td>7</td>
<td>41</td>
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<tr>
<td>Duration of treatment</td>
<td>6</td>
<td>35</td>
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<tr>
<td>Daily applications by number</td>
<td>12</td>
<td>71</td>
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<tr>
<td>Application dose by quantity</td>
<td>2</td>
<td>12</td>
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<tr>
<td>Fully satisfied with consultation</td>
<td>8</td>
<td>47</td>
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<tr>
<td>Worried about adverse effects</td>
<td>8</td>
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Written Instructions

- Action plans

### Your Child’s Eczema Action Plan

**What is eczema?**
Eczema, also called atopic dermatitis, is a chronic disease of the skin—meaning it is an ongoing problem. It causes dry, itchy, irritated skin and can be stressful for kids and families. It is not contagious. It sometimes runs in families, but not everyone in the family will have eczema.

Even though there is no cure, there are lots of good ways to control eczema. The BEST thing you can do for eczema is to keep skin moisturized! Kids with eczema have dry skin, and the drier the skin, the more itchy and irritated the skin will be.

**Here are some tips:**
- Bathe daily. Use lukewarm water, 10 minutes or less.
- Use a small amount of mild soap. Choose one that is fragrance free. A liquid or bar is fine. Some that are specially made to be milder include: Dove, Cetaphil, Purpose, CeraVe
- Pat skin dry—don't rub. Be gentle; rough rubbing can irritate skin.
- Moisturize. This is best done right after bathing, when the skin is still a little wet. Moisturize as needed throughout the rest of the day.
- Choose a moisturizer without fragrance. Here are some examples: Eucerin cream, Cetaphil cream, CeraVe cream, Aquaphor ointment, Vaseline petroleum jelly ointment
- Choose fragrance-free soaps, moisturizers, & laundry detergent. Don’t use dryer sheets; they are too irritating.

**What to do in a flare:**
Despite good routine care, your child’s eczema may still flare. The plan below will tell you what medicines to use to get the flare under control.

Don’t forget—keep using good routine skin care even during a flare!

**What to use during a flare:**

**1. NORMAL/DRY:**
Normal skin, a little dry, not itching much if at all.

**PLAN:**
- Regular skin care routine; moisturize twice daily

**2. MILD:** Itchy skin with light redness.

**PLAN:**
- Regular skin care routine, but moisturize a little extra
- HYDROCORTISONE Cream: use once a day until the itching is gone (Use HYDROCORTISONE 2.5% Cream to the face and genitals.)

**3. MODERATE:** Bad itching that keeps you and/or your child awake at night or causes scratching that leaves marks.

**PLAN:**
- Regular skin care routine, but moisturize a little extra
- TRIAMCINOLONE 0.1% OINTMENT: use twice a day until the itching is gone (Use HYDROCORTISONE 2.5% Cream to the face and genitals.)

**4. SEVERE:** Skin that is PAINFUL, RED, CRUSTED, or has PUS. Your child may have a FEVER or CHILLS.

**PLAN:**
- CALL YOUR DOCTOR TO SCHEDULE AN APPOINTMENT!
- Your child may have an infection requiring antibiotics.

**USE THESE MEDICINES FOR:**

If your child is not better by then, is getting worse at any time, or shows signs of infection (fever, chills, pus, or crusting), call your doctor at ________


Let us know how your child is doing overall.

Next appointment:
Motivating Kids

- Positive reinforcement
- Sticker calendar
Side Effects are a Mixed Bag

- Side effects & fear of them can reduce compliance
- Side effects may also be an opportunity
- For acne patients on spironolactone
  - “This drug is a diuretic. In addition to its effect on your acne, you may also notice some weight loss.”
- For scalp psoriasis, tell patients: This may sting…
  - That’s because it is so strong.
  - The stinging is a sign that it is working
  - Most guys don’t have what it takes to use this stuff
98 (or more) out of 100 don’t get a serious infection

Pharmacy Level Coordination

• Refill reminders
  – Can result in hoarding

• Education
  – Standard education (risks) may make things worse
  – Practical tools to put risk into perspective

• Coordinate timing of refills
  – Get them all in sync
  – Tough when multiple pharmacies are involved

• Can provide “caring”
Address Cost Issues

- Prescribe low cost medicines
- Give patients a range of options
  - Lower cost generics
  - Higher cost drugs that have greater benefit
- Patient assistance programs
  - Company-sponsored copay or other assistance programs
  - Local indigent pharmacy resources
- Change the priority/urgency
  - Real and perceived cost/benefit
- Encourage patient to share cell phone with the pharmacist
Samples

- I am no longer able to have drug samples in our university clinic
- Using samples
  - Helps patients know the right way to use the medicine
  - Helps get them over the fear of starting a new medicine
  - Begins to get them in the habit
Inertia

• Powerful force
  – Opt out vs opt in
    • Dramatically increases retirement plan participation
  – Keeps people from switching medications

• Also, too much choice isn’t helpful
  – People choose the middle
Anchoring

- How willing would you be to take a shot once a month?
- How willing would you be to take a shot once a day? Once a month?

[Box plot diagram showing willingness to take a shot on different schedules, accompanied by text: Unpublished data]
Having Something at Stake

- Adherence to meeting attendance
  - You have to charge a registration fee or no one will show up
- If patients have paid a copay, they will use the medication
- On the other hand, if the copay is too high, they are less likely to fill the medication
Truly Resistant (Non-Adherent) Patients

• It may not be resistant T-cells
• Use HCP-administered treatments
  – Hospitalization
  – IM triamcinolone
  – Office application of treatments
  – Phototherapy
    • Apply the topicals at the phototherapy visits
Adherence to Biologics

- Adherence to biologics is limited
  - Ask, “Are you keeping the extra syringes you’ve accumulated refrigerated like you are supposed to?”
  - Some practices have better adherence rates than others

- Provide structure
  - Have patients pick the one or two days of the week that they take the medicine and stick to it

- Don’t scare patients off
  - The treatment is probably safer than driving on a highway
Internet Survey & Contest

- Half the subjects received a weekly email link to the survey
- For each completed survey, subjects were entered to win an iPod Nano
- For 5 of 6 completed surveys, subjects received a $5 gift card

An Online Survey Improves Adherence

The Impact of Weekly Internet Surveys on Adherence Over Time

Steve’s Standard Model

Psoriasis

Psychosocial

Joint Symptoms

Localized?

Topicals

Promote good adherence

Yes

No

Phototherapy

Ibuprofen

Methotrexate

Biologics (which one?)

Psoriasis Foundation

Rheumatology
Conclusions

• New treatments (biologics) have been revolutionary
• Guidelines recommend screening for arthritis & other comorbidities
• Emerging options (IL17 & IL23) are powerful tools
• Our understanding of the Th17 pathway underlies new psoriasis treatments
• Psoriasis is a terrible disease, but poor adherence is still a major limitation to treatment