Management of Pediatric Psoriasis

Updates from the New AAD/NPF Care Guidelines

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Disclosure

Kelly M. Cordoro, MD

S036 Psoriasis

Celgene Corporation
Scientific Steering Committee
NOTE:
Most clinical photos have been removed from this handout in accordance with institutional policy.
Goals of this Talk

Highlight management approaches relevant to pediatric patients.

Underscore these approaches as part of the new AAD/NPF psoriasis guideline of care (unpublished as of February 2019).
Scope and Methodology of the Pediatric Guideline

Pediatric Population (<18)

Last guidelines (2008-2011) had no separate peds document.

Methods: best evidence, expert consensus.

Final version: February 18th, 2019
Pediatric Psoriasis Treatment Guideline: 6 Sections

1. Severity
2. Triggers/Comorbidities
3. Topicals
4. Phototherapy
5. Systemics
6. Biologics
Important Pediatric Considerations

- Very little data; no “one size fits all” approach
- Individualize (age, disease, comorbidity, preferences)
- No lower age limit for systemic therapy; *kids are undertreated*
- Psychosocial wellness and QOL; stigma during vulnerable period
- Robust physician/patient/caregiver relationship; shared decisions
Consider objective and subjective measures when determining severity and treatment plans for kids.

**Objective: body surface area and sites of involvement**
- Extent/BSA and systemic impact (pustular psoriasis)
- Physical disability (PsA; pain; itch)

**Subjective: patient-reported impact on life**
- Bullying, shaming, embarrassment, social withdrawal
- 5% BSA may be severe for certain patients; 50% BSA may not be
- Emotional disability/impact on quality of life

PASI is not used commonly in clinical practice.
<table>
<thead>
<tr>
<th>BSA</th>
<th>Low Impact</th>
<th>High Impact</th>
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<tr>
<td>Low BSA</td>
<td>Mild</td>
<td>Mod-Severe</td>
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<tr>
<td>Mod-Severe</td>
<td>High</td>
<td>Severe</td>
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ASSESS TRIGGERS: infection most common

Especially strep (pharyngeal, anogenital)

Culture and treat if positive.

Ped Pso Comorbidities

- NAFLD (fatty liver)
- Obesity
- Hypertension
- Dyslipidemia
- IBD
- Diabetes
- Arthritis; Uveitis
- Psych Disorders
- Quality of Life
NAFLD (fatty liver)
Quality of Life
Psych Disorders
Arthritis
Obesity
Hypertension
Dyslipidemia
IBD
Diabetes
BEST DATA
Critical to screen for obesity, arthritis, mental health disorders (depression).
Psoriatic Arthritis

- 10-40% of kids with psoriasis; peak onset: 2-3 and 9-12 years old.
- 80% of children develop arthritis prior to skin disease.
- Dx based on clinical and imaging features (no biomarker).
- Severe nail psoriasis is a marker for psoriatic arthritis.

Augustin BJD 2010  Pourchot et al, 2017
Psychiatric and Emotional Comorbidities

- Anxiety
- Depression
- Social isolation
- Substance Abuse
- Poor patient/caregiver QOL

Situational and biological (TNF in skin and brain).
Common immunopathogenesis?

Pediatric-onset patients may be at greatest risk.

Bilgic et al Pedi Derm 2010
Kim et al Pedi Derm 2010
Kimball et al JAAD 2012
Todberg T et al BJD 2016
Tollefson et al JAAD 2017
Each represents an insult to self-esteem and overall well-being.
Annual Screening Recs for Healthy Psoriasis Patients Aged 2-21

- Blood pressure
- BMI (body mass index)
- Arthritis screen by H&P
  - Joint pain / swelling / inflammation
  - Joint stiffness after rest; limp
- Mood disorders screen
  - Anxiety, depression, substance abuse

Screening follows *AAP age-related guidelines. No panels/questionnaires.

* AAP = American Academy of Pediatrics

Additional screening only if H&P suggest (ex. lipids, DM, fatty liver if obese).

Osier et al. JAMA Derm 2017.
Pediatric Psoriasis Comorbidity Screening Guidelines

Emily Osier, MD; Audrey S. Wang, MD; Megha M. Tollefson, MD; Kelly M. Cordoro, MD; Stephen R. Daniels, MD, PhD; Andrew Eichenfield, MD; Joel M. Gelfand, MD, MSCE; Alice B. Gottlieb, MD, PhD; Alexa B. Kimball, MD, MPH; Mark Lebwohl, MD; Nehal N. Mehta, MD, MSCE; Amy S. Paller, MD; Jeffrey B. Schwimmer, MD; Dennis M. Styne, MD; Abby S. Van Voorhees, MD; Wynnis L. Tom, MD; Lawrence F. Eichenfield, MD

- 153 relevant manuscripts reviewed + expert panel convened.
- Pediatric derm, rheum, GI, endocrin, adult and pediatric cardiology.
- Expert consensus recommendations based on disease-oriented evidence and expert opinion.
Guides recommendations made in AAD/NPF pediatric pso guideline.

Involve the PCP for routine age-related screening.

Additional screening warranted only if signs/sx present on H&P.
Topical Therapy: local/limited disease; adjunct to photo/systemic Rx

1<sup>st</sup> Line: Steroids, Vit D analogues
- *potency and vehicle

Little data for:
Topical calcineurin inhibitors
- *sensitive sites (face, groin)

Tazarotene, anthralin, tar
- *select situations (scalp, very thick lesions, phototherapy)
Phototherapy: NB-UVB is 1\textsuperscript{st} Line

Retinoid (acitretin) + NB-UVB = synergistic
**Systemics**
- Methotrexate
- Cyclosporine
- Acitretin

**Biologics**
- TNF inhibitors
- IL12/23 inhibitors
- IL17 inhibitors

MTX: most commonly used drug worldwide; most data.

Anti-TNF: most efficacy and safety data (biologics) for ped psoriasis.

Give all options equal consideration. No age restriction. Individualize.

Approvals for Moderate-Severe Pediatric Plaque Psoriasis

Etanercept: age 6 years (EU 2009); age 4 years (US 2016)

Adalimumab: age 4 years (EU 2015)

Ustekinumab: age 12 years (EU 2015; US 2017)

Little pediatric data for other biologics. In trials: Apremilast (6 and older), Ustekinumab (6-12), Ixekizumab (12 and older).
Case:

9 year old male with severe plaque psoriasis.

s/p Goeckerman

Eval: No clear triggers. BMI and BP normal. No arthritis. Psychosocial impairment.

Labs: ALT high initially then NL. PPD negative. No strep.
Choice:
bilogic due to severity, chronicity, need for fast efficacy.

Shared decision making: Adalimumab
(denied by insurance).

Rx: Methotrexate
Nearly cleared.

Started adalimumab when approved, completely clear.
Persistent psychosocial impact, in therapy.
Key Points: Methotrexate for Severe Psoriasis

- Slower onset but sustained remission.
- Baseline TB, vaccines. CBC, LFT- ongoing.
- 0.2-0.7mg/kg/wk po or SQ. Max 25/wk.
- Folate supplementation 1mg daily.

Key Points: Anti-TNF Therapy for Severe Psoriasis
Most Data Among All Biologics / Primary Place in Rx

Rapid onset.

Only required lab per PI is annual TB test (practice varies).

AE: TB risk, injection site reaction. No lymphoma signal in peds to date.

Efficacy may wane over time. MTX to prevent HAHA and HACA.

Etanercept PI: 2016.
Key Messages from New Pediatric Guidelines

Severity, Triggers and Comorbidity Screening

Severity in children: consider BSA and impact of disease.

Look for triggers (Strep); Assess for comorbidities via H&P.

Best available evidence: ped psoriasis associated with obesity, metabolic syndrome, arthritis and psychosocial impairment.

In absence of specific signs/sx, evidence does not support lab screening beyond standard AAP age-based pediatric guidelines.
### Key Messages from New Pediatric Guidelines

*Topicals, Phototherapy, Systemic and Biologic Therapy*

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<td><strong>Steroids and Vit D analogues</strong> are 1st line topicals. Determine optimal potency and vehicle by psoriasis severity and site, not by patient age.</td>
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<td><strong>Choice of systemic or biologic treatment for severe psoriasis</strong> is individualized based on clinical features and family preferences.</td>
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<td><strong>Conventional systemics and biologic therapies</strong> should be considered for severe pediatric psoriasis regardless of age or approval status.</td>
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<tr>
<td><strong>MTX and TNF-inhibitors</strong> have the most data for peds psoriasis but all agents should be considered based on clinical context.</td>
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AAD/NPF Pediatric Psoriasis Management Guideline, February 2019

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www.pedraresearch.org