Update in Pediatric Dermatology

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Objectives

Discuss new developments in dermatology

Learn treatment pearls for most common pediatric dermatologic conditions
Acne Vulgaris

Most common skin problem in U.S.\(^1\)

AL Zaenglein, DM Thiboutot: Acne vulgaris.
JL Bologna JL Jorizzo RP Rapini Dermatology.
2003 Mosby Edinburgh
Hurwitz Clinical Pediatric Dermatology 5th Edition
Guidelines

❖ American Academy of Dermatology (AAD.org)
❖ Practice Management Center
❖ Quality
❖ Clinical Guidelines
Benzoyl peroxide is recommended for patients on topical or systemic antibiotic therapy*

PanOxyl

ACNE CREAMY WASH

Benzoyl Peroxide 4%

Daily Control

NET WT 6 oz (170 g)
Acne Pearls

Given current data, no specific dietary changes are recommended in the management of acne
<table>
<thead>
<tr>
<th>Decreased emotional well-being</th>
<th>Increased suicidal ideation</th>
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<tbody>
<tr>
<td>Withdrawal from society</td>
<td>Poorer academic performance</td>
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<tr>
<td>Depression</td>
<td>Higher unemployment rates</td>
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<td>Decreased self-esteem</td>
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Acne Pearls

Oral isotretinoin is used for:

- Severe Acne
- Non-responsive acne
- Acne that produces physical or psychological scars
Verruca Vulgaris
Therapeutic Pearls

- Consider watchful waiting
- Lower expectations of treatment
Therapeutic Pearl

+ WartSTICK

- Maximum strength 40% salicylic acid
- New look! Same great product
- For the removal of common and plantar warts
- Stronger than liquid
- Easy to use

+ Duct tape
Other Treatments

- **Cryotherapy**
- **Immunotherapy**
  - Cimetidine 30-40mg/kg/day divided bid
  - Imiquimod
  - Candida antigen injection
- **Pulsed dye laser**
- **Cantharidin**
Verruca plantaris
Verruca Plana
Condyloma Acuminata

Molluscum contagiosum
Molluscum contagiosum
Treatment

Observation
Cantharidin
Cryotherapy
Curettage
Cimetidine

Do Not Use
Imiquimod!
Therapeutic Pearl

Cantharidin is preferred treatment by most pediatric dermatologists*

Cantharidin

 процедура:

- Vigorously shake bottle before using
- Apply with wooden end of cotton tip applicator
- Apply single drop
- Let dry 3-5 minutes
- Wash off in 2-6 hours
Therapeutic Pearl

Treat molluscum dermatitis to reduce auto-inoculation*

Atopic Dermatitis (AD)

Characteristics

- Pruritus
- Relapsing and Recurring Course
- Onset in childhood
- Association with atopy
4 Pillars of Atopic Dermatitis

- Xerosis
  - Emollients
- Inflammation
  - Anti-Inflammatories
  - Mupirocin
- Infection
  - Bleach baths
- Itch
  - Anti-histamines
Treatment

Cutaneous hydration*

Atopic Dermatitis Pearl

Bathing is recommended, but no standard exists for frequency or duration*

Atopic Dermatitis Pearl

Bleach baths may reduce AD flares and AD severity*

Bleach Bath: How To?

- Add ½ cup of 6% household bleach to a full bath of warm water and mix
- ¼ cup if small bath
- 1-2 teaspoon per gallon for bucket bath
- Soak 10-20 minutes approximately twice weekly
- Rinse with normal water before exiting bath
Atopic Dermatitis

What’s New??
Topical PDE4 Inhibitor

- Crisaborole (Eucrisa) 2% ointment
  - Approved for mild to moderate atopic dermatitis in ages 2 years or older
  - Boron based topical phosphodiesterase inhibitor
  - Application site burning most common SE
Dupilumab

- Fully human monoclonal Ab targeting IL-4R
- Approved for adults with mod-severe eczema in 2017
- Approved for ages 12+ with mod-severe eczema recently
Psoriasis

Affects approximately 0.5-1.0% of children less than age 18
Psoriasis Comorbidity

- Obesity
- Hyperlipidemia
- Hypertension
- Metabolic Syndrome
Psoriasis Pearl

- Start screening earlier for arthritis, depression and anxiety
- Screen for overweight/obesity using BMI starting at age 2
- Screen for diabetes every 3 years starting at age 10, or at puberty if obese plus other risk factors
Infantile Hemangioma (IH)

Most common benign soft-tissue tumor of childhood

Affects up to 5% of children
Natural History

- Infantile hemangioma
- Vascular malformation

Size of lesion over time:
- Birth to 6 mos: Increase
- 6 mos to 1 yr: Peak
- 1 yr to 10 yr: Decrease
IH-Treatment

Observation alone most commonly

Reasons to treat:

- Function threatening
- Disfiguring
- Ulcerated
Propranolol

- Vasoconstrictive on endothelial cells
- Decrease nitric oxide
- Decrease VEGF
- Induce apoptosis of endothelial cells

Side effects:

- Nightmares/insomnia
- Hypoglycemia
- Hypotension
- Bradycardia
- Bronchospasm
- Hypothermia
Propranolol Safety

- Propranolol enters CSF
- Propranolol impairs:
  - “Word/photographic recall
  - Reaction time
  - Sleep


- Parents completed Dutch 48-months ASQ
- Height and weight were collected from charts
- 82 Patients included in the study
- No difference on ASQ from controls
Propranolol Pearls

✦ Excellent safety profile
✦ Can be initiated outpatient
✦ Best response if started early
Propranolol

Outpatient Initiation:
- Greater than 8 weeks AGA
- Good social support
- Lack of comorbid conditions
Timolol maleate


Retrospective multi center study including 731 patients across 9 centers
Timolol maleate

- IH likely to respond if thin
- Excellent alternative to watchful waiting
Nevus Flammeus (Port Wine Stain (PWS))

Macular stains with pink-red color

A capillary malformation

Lack rapid growth or proliferation

Often unilateral, favor the face
Sturge-Weber Syndrome

- PWS
- Leptomeningeal angiomatosis
- Glaucoma
Sturge Weber Syndrome and Port-Wine Stains Caused by Somatic Mutation in GNAQ. Shirly et al. NEJM. March 2013
Port-Wine Stain

Laser Treatment

Pulsed-dye laser
Port-Wine Stain Pearls

- Benefit of early treatment
- Better clinical response
- Less risk of anesthesia
- Psychological benefits
Conclusions

Acne
- Always BPO if on antibiotics
- No dietary changes
- Isotretinoin highly effective

Warts
- Wart stick plus duct tape occlusion
- Lower expectations of treatment
Conclusions

- Molluscum
  - Cantharidin highly effective
  - Cimetidine for immune boost
- Atopic Dermatitis
  - Moisturize!
  - Consider bleach baths
- Dupilumab
Conclusions

Psoriasis

Guttate flare after strep

Screen for cardiovascular comorbidity
Conclusions

Infantile Hemangioma
- Benefit of early treatment w/propranolol
- Consider timolol as alternative to watchful waiting

Port Wine Stain
- Benefit of early treatment w/PDL
- Less risk; Better result
Questions???