Dermatology Update 2017
Pediatric Dermatology

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Updates
July 2016 - July 2017

• Atopic dermatitis
• Vascular malformations
• Anesthesia
• Allergies
• Teenagers...

NEW THERAPIES

Crisaborole 2% Ointment

• PDE4 inhibitor → decrease inflammation
• FDA approved for mild-moderate atopic dermatitis ≥2 years old
• Twice daily application
• SE: burning, stinging

New Therapies!

• Crisaborole 2% ointment
• Dupilimumab
  – IL4 receptor antagonist
  – Approved for adults (≥18yo) with moderate-severe atopic dermatitis
    • Blauvelt et al. Lancet 2017; 389(10086)
  – Pediatric studies still pending

Paller et al. JAAD 2016;75(3)
PREVENTION

Daily moisturization of high risk neonates/infants for 6-8 months decreases the incidence of AD
- High risk = 1st degree relative with AD, asthma, allergic rhinitis
- Sunflower seed oil, Aquaphor, Cetaphil cream
- Improved skin barrier

Simpson et al. J Allergy Clin Immunol 2014;134(4)
Xu et al. JAMA Pediatrics 2017;171(2)

Does Lactobacillus rhamnosus administration from 0-6mo decrease eczema and asthma?
- 1 parent had asthma
- 184 infants
- 10 billion CFU LGG and 225mg inulin vs inulin
- Endpoints: eczema or asthma w/in 2 years
- Conclusion: no significant decrease in hazard ratio

Kalliomäki et al. Lancet 2001;357(9262)
Kopp et al. Pediatrics 2008;121(4)
Cabana et al. Pediatrics 2017;140(3)

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PREDISPOSING FACTORS

Multiple gestation
Female
IVF
CVS, amniocentesis
Placental abnormalities
Low birth weight
Prematurity
Gestational hypertension, pre-eclampsia
Maternal progesterone use
Gestational diabetes
PHACE SYNDROME

PHACE Syndrome

- Posterior fossa malformation
- Hemangioma
- Arterial anomalies
- Coarctation of the aorta/cardiac defects
- Eye abnormalities
- Sternal clefting/supraumbilical abdominal raphe

PHACE Update

- Screen:
  - Segmental hemangioma of the head (face or scalp), >5cm
  - Segmental hemangioma of the neck, upper trunk, trunk and proximal upper extremity PLUS major finding in PHACE
  - No hemangioma but other findings in PHACE
- PHACE if:

PHACE Update

- Arteriopathy and the risk of strokes
  - Findings risk stratified

PHACE Update

- Long term morbidity
  - Caution using propranolol in severe arteriopathy
  - Headaches
  - Speech and language delays
  - Thyroid dysfunction, hypopituitarism
  - Dental enamel hypoplasia
PHACE Evaluation

- 82 children treated with propranolol
  - Started 4.8mo
  - 2-3mg/kg/day
  - Treated 12.9 months
  - Age control matched
- At 4 years

Propranolol and Development

- 23 5-7yo treated with propranolol as infants
- 2mg/kg/d for 7.5 months on average
- Cognitive function and memory testing
- Result:

LYMPHATIC MALFORMATIONS
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THE RISK OF ANESTHESIA

JAMA 2016;315(21)
Lancet 2016;387(10015)
JAMA 2016;315(21)

- Sibling matched cohort study when one sibling had inguinal hernia repair at <3mo assessed at 8-15 years of age.
- Assessed global cognitive functioning and domain specific neurocognitive functions and behavior.
- No statistically significant differences in mean scores were found between sibling pairs in memory/learning, motor/processing speed, visuospatial function, attention, executive function, language, or behavior.
Infants <60 weeks postmenstrual age and >26 weeks gestation with inguinal hernia repair
- Randomized to regional or general anesthesia
- Interim result at 2 years old – cognitive, motor, and language assessment
- No statistically significant difference between groups

PEANUT ALLERGY PREVENTION


Updates
October 2016 - July 2017

- Atopic dermatitis
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- Anesthesia
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- Teenagers...
Salt Ice Challenge

Eraser Challenge

Deodorant Challenge

- Aerosol deodorant sprayed onto the skin for as long as possible or as many times as possible

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- Atopic dermatitis
  - Crisaborole! Daily moisturization is cost-effective to decrease AD in high-risk infants, but lactobacillus supplementation isn’t effective
- Vascular malformations
  - Gestational diabetes is a risk factor for hemangiomas
  - Does propranolol affect cognitive impairment? Maybe not
  - Topical rapamycin is safe in pediatric facial malformations
- Anesthesia
  - Preliminary studies indicate no significant difference in neurodevelopment between GA and non-GA exposed infants
  - FDA warning: Exposure to GA/sedation for > 3 hours or over multiple procedures may negatively impact brain development in children < 3 years.
- Allergies
  - New published guidelines for how to introduce peanuts to infants
- Teenagers
  - They do crazy things
Thank You