Neonates

Neonatal Pustular Melanosis
Mongolian Spots
Neonatal Pustular Melanosis

- TNPM is a common condition
- Affects 4%-5% of AA children at birth as compared to 0.1%-0.3% of white infants
- Benign
- Self limited
- No treatment necessary
Neonatal Pustular Melanosis

- Prominent pustules, especially on the palms and soles
- No erythema
- After rupture, peripheral collarettes of scale observed
- Hyperpigmentation develops, which may last for several months.
Mongolian Spots

- **Prevalence**
  - 10% white
  - 50% Hispanic
  - 90-100% Asian and African descent

- **Possible association with inborn errors of metabolism**
  - Based primarily on case reports
  - Most cases described with widespread MS
  - GM1 gangliosidosis, Hurler’s disease, Hunter’s syndrome, mucolipidosis, Niemann-Pick disease and mannosidosis

- **Persistence beyond one year** associated with
  - extrasacral position
  - size larger than 10 cm
  - dark-colored lesions (blue/blue-black)

Infants/Toddlers

Atopic Dermatitis
Atopic Dermatitis

- More common in AA children
- AA race is considered a risk factor for having atopic dermatitis in the first 6 months of life

Atopic Dermatitis

- Prevalence in pediatric population
  - African Americans 15.9%
  - Caucasians 9.7%


Atopic Dermatitis in African American Children

- Fillagrin mutations were originally reported primarily in children of European descent
- Recent studies suggest that fillagrin mutations play a role in AA patients
- Fillagrin 2 defects associated with more persistent atopic dermatitis in AA patients

Atopic Dermatitis

- Moderate to severe disease in
  - 75% of AA
  - 40% of Caucasian
- Focus on educating parents
- Treat more aggressively
  - Don’t be afraid to use more potent steroids

- Clobetasol x 2 weeks
- Cephalexin x 10 days
- Fluocinonide or triamcinolone for maintenance
- Petrolatum head to toe
What about the oils?

Commonly used by African Americans as emollients

“Natural” approach to treating the barrier
Prepubertal Gynecomastia Linked to Lavender and Tea Tree Oils

Derek V. Henley, Ph.D., Natasha Lipson, M.D., Kenneth S. Korach, Ph.D., and Clifford A. Bloch, M.D.


Most cases of male prepubertal gynecomastia are classified as idiopathic. We investigated possible causes of gynecomastia in three prepubertal boys who were otherwise healthy and had normal serum concentrations of endogenous steroids. In all three boys, gynecomastia coincided with the topical application of products that contained lavender and tea tree oils. Gynecomastia resolved in each patient shortly after the use of products containing these oils was discontinued. Furthermore, studies in human cell lines indicated that the two oils had estrogenic and antiandrogenic activities. We conclude that repeated topical exposure to lavender and tea tree oils probably caused prepubertal gynecomastia in these boys.
Hair Oil Use and Early Menarche

- 300 AA, African-Carribbean, Hispanic, and white women from NYC surveyed
- Questioned about
  - hair oil, lotion, leave in conditioner, perm and other hair products
  - Age at menarche
- AA more likely to use hair products and reached menarche at an earlier age
- Childhood hair oil use and perms were associated with earlier menarche risk ratio 1.4
- Other types of hair products were not associated with earlier menarche
Olive Oil and the Skin Barrier

- Nineteen adult volunteers with and without a history of atopic dermatitis
- Group 1: six drops of olive oil to one forearm twice daily for 5 weeks
- Group 2: applied six drops of olive oil to one forearm and six drops of sunflower seed oil to the other twice daily for 4 weeks.

Olive Oil and the Skin Barrier

- Topical application of olive oil for 4 weeks caused
  - significant reduction in stratum corneum integrity
  - induced mild erythema in volunteers with and without a history of atopic dermatitis
- Sunflower seed oil preserved stratum corneum integrity, did not cause erythema, and improved hydration in the same volunteers

“These findings challenge the unfounded belief that all natural oils are beneficial for the skin and highlight the need for further research.”
What can we recommend?

- Petrolatum
- Coconut oil may be an option
  - Studies have shown it is equivalent and/or superior to mineral oil in infants with xerosis and atopic dermatitis
  - No estrogenic component


School Aged Children

Tinea Capitis
Traction alopecia
Vitiligo
Vitamin D deficiency
Hair Care Practices in African American girls
Survey of 201 AA girls 1 to 15 yo in primary care and dermatology clinics in Detroit

- 99% used oil, grease, or lotion on hair and/or scalp
- 61% shampooed every 2 weeks
- 22% shampooed once per week or more often
- 17% shampooed every 3rd or 4th week
- 41% initiated hot combing between 4 to 6 years old
- 46% reported first chemical relaxer between 4 to 8 years old

Wright D, Gathers R, Kapke A Hair Care Practices and their association with scalp and hair disorders in AA girls, J Am Acad Derm 64(2) Feb 2011
Tinea Capitis

- Tinea capitis is common in African-American children
- Diagnosis is based on clinical findings
  - scale on the scalp*
  - lymphadenopathy*
  - cultures should be performed but clinicians should not wait on cultures to initiate treatment
Tinea Capitis

- In adults, tinea capitis tends to affect African-American women
- In children with recurrent tinea capitis, don’t forget to ask about clinical signs and symptoms in the siblings’ and mother’s scalp

Tinea Capitis in US (Ohio)

- **T tonsurans**-most common (88.9%)
  - T. violaceum (4.2%)

- **Children of African descent most common (86.2%)**
  - African American 76.5%
  - Somali 2.5%
  - Ethiopian 1.3%
  - Others 5.1%
  - Caucasian/European 14.6%

- **Urban (75.2%) vs suburban (24.8%)**

Coloe JR. Diab M. Moennich J. *Tinea capitis among children in the Columbus area, Ohio, USA* Mycoses. 53(2):158-62, 2010 Mar 1
Tinea Capitis in Europe

- **M Canis** is most common in Central and Southern Europe.
- **Trichophyton tonsurans** accounts for 50-90% of cases in the UK.
- In Europe, tinea capitis is most common in people of African descent.

_Curr Opin Infect Dis. 2009 Apr;22(2):115-8_
Tinea capitis: Risk Factors

Detroit study

- It has been hypothesized that the increased prevalence of tinea capitis in AA children is due to infrequent washing, hair oils and/or tight braids
- In this and 2 other studies there was no association with
  - Frequency of shampooing
  - Use of oils
  - Braids
- May be due to structural properties of African hair (not hairstyling)

Wright D, Gathers R, Kapke A Hair Care Practices and their association with scalp and hair disorders in AA girls, J Am Acad Derm 64(2) Feb 2011
Sharma V Silverberg N Howard R Arch Ped Adolesc Med 2001;155:818-21
Reid B Shimkin M Blank F Public Health rep 1968;83:497-502
- **Risk Factors**
  - African ancestry (86.2%)  
  - Urban setting (75.2%)  
  - Scale on the scalp*  
  - Lymphadenopathy*  

- **No association**
  - Frequency of shampooing  
  - Use of oils  
  - Braids

References:
- Silverberg N, Weinberg J, DeLeo V. *J Am Acad Dermatol* 2002;46:S120-4
- Wright D, Gathers R, Kapke A. *Hair Care Practices and their association with scalp and hair disorders in AA girls, J Am Acad Derm* 64(2) Feb 2011
- Reid B, Shimkin M, Blank F. *Public Health rep* 1968;83:497-502
Tinea Capitis: Treatment

- Micronized griseofulvin 20-25mg/kg
  - 6-8 weeks
- Terbinafine granules up to 6 weeks
  - 125.0 mg <25kg
  - 187.5mg 25kg-35kg mg
  - 250.0 mg >35kg
  - 125.0-mg or 187.5-mg packets should be mixed in non-acidic food (i.e., avoid fruit-based foods such as applesauce)
- FDA and package insert recommend baseline LFTs

Terbinafine vs Griseofulvin

- Meta-analysis of 6 studies
  - A 2- to 4-week course of terbinafine is at least as effective as a 6- to 8-week course of griseofulvin for the treatment of *Trichophyton* infections of the scalp
  - Griseofulvin is likely to be superior to terbinafine for the rare cases caused by *Microsporum* species.

Terbinafine vs Griseofulvin

- Head to head study
- Rates of complete cure and mycologic cure were significantly higher for terbinafine than for griseofulvin (45.1% vs 39.2% and 61.5% vs 55.5%, respectively; P < .05)
- A majority (86.7%) of patients received griseofulvin, 10 to 19.9 mg/kg per day
- For M. canis, mycologic and clinical cure rates were significantly better with griseofulvin than with terbinafine (P < .05)

Tinea Capitis: Treatment

- Antifungal shampoo
  - Wash 1-2x/week
- Topical antifungals
  - Lotions and creams
    - Ciclopirox or ketoconazole
- If recurrent consider culture
Traction Alopecia
Traction Alopecia

- Occurs when hair is pulled too tightly
- Classically, there is hair loss on the frontal and/or temporal scalp with a rim of short hairs at the hairline
Traction Alopecia

- Risk factors
  - Traction (braids/weaves) on relaxed hair (OR 3.47)
  - Hair dressing symptoms - highest was tight braids that caused pimples (OR 1.98)
  - Wearing cornrows in the last 12 months (OR 2.4)
  - History of chemical relaxer (OR 2.3)
    - Cornrows without relaxer (aOR 3.02)
    - Cornrows with relaxer (aOR 5.27)

- No association
  - Afros
Traction Alopecia

- Traction alopecia is preventable with early intervention
- Educate the parent in a culturally sensitive approach to avoid tight hairstyles
- Treat with topical steroids if any inflammation

Skin and Allergy News, February 2002
Recommendations for traction alopecia

- To avoid traction alopecia
  - For young children—educate the parents
    “avoid tight cornrows or pulling chemically relaxed hair into tight hairstyles”
  - If child/parent prefers cornrows—delay chemical relaxers
  - For teenagers who prefer weaves—suggest that they have them done on natural hair to lower the risk
    “Avoid all hairstyles that induce pain”
  - 2-5% Minoxidil has been reported in adults
    - Reported use in children is limited
Vitiligo
Vitiligo

- 1-2 percent of the world's population
- Over 40 million people are affected
- Affects all races
- More noticeable in people of color
Vitiligo-Work Up

- Ask about family history of autoimmune disease
- Do autoimmune work up
  - ANA/Thyroid antibodies
  - NALP1 is the gene associated with vitiligo and autoimmune thyroid disease

Vitiligo-Treatment

- Topical steroids
  - Intermittent treatment with Class I steroid for 1-2 weeks can be very effective
- Topical Immunomodulators
  - Tacrolimus and Pimecrolimus
- Oral antioxidants/vitamins
- NB-UVB
  - Age dependent

Juhlin L, Olsson MJ. Improvement of vitiligo after oral treatment with vitamin B12 and folic acid and the importance of sun exposure. Acta Derm Venereol 1997;77:460

Vitiligo

- Topical tacrolimus is effective
- Works best on the face
- Combine with 10 minutes of sunlight/day
- Twice daily application is most effective

Protopic 0.1% ointment vs Clobetasol 0.05% ointment

- Children aged 2-16 years with vitiligo 6 month study
  - 'facial' (n = 55) and 'nonfacial' (n = 45)
  - Clobetasol 0.05% ointment (n = 30)
  - T 0.1% ointment (n = 31)
  - successful repigmentation: > 50% improvement

Facial
- Clobetasol- 58% responded
- Tacrolimus 58% responded

Nonfacial
- Clobetasol 39% responded
- Tacrolimus 23% responded

*British Journal of Dermatology. 165(3):626-32, 2011 Sep*
Vitiligo-Coverage

- Coverage makeup
  - Dermablend/Covermark
    - Waterproof/smudge resistant
  - Dyoderm or VitaDye
    - Stain
- Mineral Makeup
  - Contains zinc oxides, titanium dioxide, iron oxides
  - Offers sun protection SPF 15-30
- Cover FX
Coverage MakeUp
Vitiligo

- Support Groups
  - National Vitiligo Foundation
  - www.nvfi.org
Vitamin D Deficiency
Vitamin D deficiency in AA children

- Many studies demonstrate increased rates of vitamin D deficiency in African American children and adolescents
- Consider checking Vitamin D in AA children with low dairy intake or UV exposure

Obesity, Vitamin D, and Race

- Recent studies demonstrate that in AA children BMI is inversely related to Vitamin D levels
- Obese AA children are at risk for Vit D insufficiency
- In addition, even those with adequate dietary Vit D intake are at risk


Vitamin D status, adiposity, and lipids in black American and Caucasian children. Journal of Clinical Endocrinology & Metabolism. 96(5):1560-7, 2011 May

Vitamin D dosing

- For vitamin D deficient children, the Pediatric Endocrine Society recommends
  - 1,000 IU once daily for infants less than 1 month of age
  - 1,000-5,000 IU for children 1-12 months old
  - 5,000 IU for older children
- Vitamin D levels should be checked at 2 to 3 months to see how the patient is responding
- Once the deficiency has been corrected, patients may be prescribed a maintenance dose of between 400 and 1,000 IU by mouth daily or 50,000 IU by mouth every 4-6 weeks
Teenagers

Dissecting Folliculitis
Acanthosis Nigricans
Acne/Dyschromia
Keloids
Dissecting Cellulitis

- Chronic inflammatory disease of scalp hair follicles
- More common in AA adolescents / young adults
- Therapies
  - Antibiotics
  - IL TAC
  - Dapsone
  - Isotretinoin
  - Adalimumab (TNF antagonist)
  - Excision

3 cases of dissecting cellulitis of the scalp treated with adalimumab: control of inflammation within residual structural disease. Archives of Dermatology. 146(5):517-20, 2010 May
Acne/Dyschromia
Post-Inflammatory Hyperpigmentation

- Dyschromia (<16yo)
- Retinoids
  - not only improve acne but also pigmentation
- Azelaic acid 20% cream or 20% gel
  - Works on hyperpigmentation and acne
- Moisturizer with sunscreen!
- Consider natural therapies
Post-Inflammatory Hyperpigmentation

- Dyschromia (>16yo)
- Add hydroquinone
  - 2% available OTC
  - 4% available with a prescription
  - 6-8% can be compounded
- Apply only to the affected area as needed
- Avoid continued long term use
  - Less than 2 months
- Maintain with alternate therapies
Natural Therapies for Hyperpigmentation

- Soy
- Licorice
- Vitamin C
- Niacinamide
- N-acetylglucosamine
- Antioxidants as photoprotectants
  - Green tea
  - Proanthocyanidins (pine tree and grape seed extract)
  - Polypodium leucotomos

Note: Cocoa butter is comedogenic
Kligman formula

Before treatment

After 8 weeks of HQ8%/Tret0.025%/Dex0.1%
Licorice Extract

Baseline

After 6 weeks of treatment
Keloids
Keloids

- Typically start in adolescence
- In children with a family history of keloids, ear piercing at age 11 years or older increases the risk of keloid formation
- If parents want to pierce ears and are concerned about keloids recommend before 11 years old

Lane J Pediatrics. 2005;115:1312-1314
Treatment Options

- IL triamcinolone 20-40mg/cc
- Excision
- IL IFN
- Cyrotherapy
- Radiation
Keloid-Excision

- Follow up intralesional steroids are essential to prevent recurrence!!!
Keloid-Excision

- Excision-excellent on earlobes and face, higher recurrence on trunk
Acanthosis Nigricans
Acanthosis Nigricans

Epidemiology

• The incidence of AN in the pediatric population parallels the increase in childhood obesity and associated insulin resistance
• AN significantly associated with insulin resistance and abnormal glucose homeostasis in children
• 25% of overweight children had AN
• 50% of children with AN were AA
• 60% to 92% of black and Hispanic children with diabetes mellitus have AN

How common is acanthosis nigricans in pediatric patients?
Prevalence = 28%*

- 1438 8th graders in 12 middle schools
- 401 found to have AN on physical exam
- Texas, California, North Carolina
  - 25% AA (39% with AN)
  - 58.2% Hispanic (30% with AN)
  - 16.8% Caucasian (5.1% with AN)
- 12 schools (four per field center), in which at least 50% of the participants were from a minority race/ethnicity
- Schools were also required to have at least 50% of their enrolled students eligible for free or reduced-price school lunch
• AN was associated with a 50-100% increased likelihood of dysglycemia even after consideration of established diabetes risk factors
• AN was present in nonobese AA children
• In nonobese children with AN
  • Increased insulin 2 hours post glucose load
• Take home message:
  Recommend testing for dysglycemia in pediatric patients with acanthosis nigricans
Treatment

- Weight loss
- Recommend testing
- Urea/salicylic acid/Amonium lactate QOD
Young Adults

Progressive Macular Hypomelanosis
Confluent and Reticulated Papillomatosus of Gougerot and Carteaud
Progressive Macular Hypomelanosis
Progressive Macular Hypomelanosis

- First described in 1988 by Guillet in Martinique
- Observed asymptomatic hypopigmented macules on the trunk of young women of mixed racial background
- Progressive slow course

Perman M. Sheth P. Lucky AW. Progressive macular hypomelanosis in a 16-year old. Pediatric Dermatology. 25(1):63-5, 2008 Jan-Feb
Progressive Macular Hypomelanosis

- Differential diagnosis includes extensive pityriasis alba and tinea versicolor
- Differs histologically and clinically

Progressive Macular Hypomelanosis

Etiology

- *Propionibacterium acnes* bacteria in hair follicles are the cause of PMH as a result of production of a hypothetical depigmenting factor
  - Red follicular fluorescence in the hypopigmented spots and the absence of this phenomenon in normal skin when examined under a Wood's light in a dark room
  - Cultivation of *P. acnes* from the follicles in the hypopigmented spots but not from follicles in normal-looking skin
  - Improvement with topical antimicrobial treatment in combination with UVA light


P Acnes strains (PMH 5 and PMH7)

Draft Genome Sequences of Two Propionibacterium acnes Strains Isolated from Progressive Macular Hypomelanosis Lesions of Human Skin

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ABSTRACT

Propionibacterium acnes is a Gram-positive bacterium that is prevalent on human skin. It has been associated with skin disorders such as acne vulgaris and progressive macular hypomelanosis (PMH). Here, we report draft genome sequences of two type III P. acnes strains, PMH5 and PMH7, isolated from PMH skin lesions.

FOOTNOTES

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Progressive Macular Hypomelanosis-Wood’s Lamp
Progressive Macular Hypomelanosis Treatment

- Combination therapy with clindamycin and benzoyl peroxide
- UVA three times a week for a period of 12 weeks
- NBUVB
- Oral doxycycline

Progressive Macular Hypomelanosis
Treatment

- UVA plus benzoyl peroxide 5% gel QAM and clindamycin 1% lotion QHS vs UVA plus fluticasone
- 45 patients
- 26 week randomized within-patient left-right comparison study
- Repigmentation rate
  - 62% benzoyl peroxide/clindamycin/UVA side
  - 22% fluticasone/UVA side
  - $p < 0.0001$

Before

After 3 months of Benzoyl Peroxide 4% wash and Clindamycin lotion
Confluent And Reticulated Papillomatosis of Geugerot and Carteaud
Confluent and Reticulated Papillomatosis of Gougerot and Carteaud

- First described in 1927
- Proposed etiologies
  - Disorder of keratinization
  - Abnormal host response to fungi and bacteria
  - Endocrine disturbance
  - Variant of acanthosis nigricans
Confluent and Reticulated Papillomatosis of Gougerot and Carteaud

- “Rare” dermatosis
- Relatively common in AA teenagers
- Reported treatments
  - Minocycline (10 reports in literature)
  - Amoxicillin
  - Oral retinoids
  - Tazarotene
  - Calcipotriol
  - Urea plus tretinoin
  - Drosperrinone
Confluent and Reticulated Papillomatosis of Gougerot and Carteaud
Confluent and Reticulated Papillomatosis of Gougerot and Carteaud

- Treated with Doxycyline 150mg QD for 2 months with resolution
- Doxycycline is an excellent option without the side effects of Minocycline
Conclusion

- Transient neonatal pustular melanosis and neonatal acne
  - Common and benign
- Atopic - more common in AA **treat aggressively**
- Tinea capitis-T tonsurans, urban, AA, no relation to frequency of shampooing
- Keloid - pierce ears before 11 yo
- PMH-BP plus topical and oral Abx
- Recalcitrant TV-r/o CRPGC
Thank You!