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In Partnership with SOCS skin of color society

Racial Disparities in Dermatology

Peer-to-Peer Educational Toolkit

A compilation of key content from select presentations at the LiVDerm Deep Dive: Racial Disparities in Dermatology program.

Susan Taylor, MD
Sandra Lazarus Professor of Dermatology
Perelman School of Medicine
Philadelphia, PA

Ginette Okoye, MD, FAAD
Professor and Chair
Department of Dermatology
Howard University College of Medicine
Washington, DC

Amy McMichael, MD
Professor and Chair
Department of Dermatology
Wake Forest Baptist Medical Center
Winston-Salem, NC

Candrice Heath, MD, FAAP, FAAD
Assistant Professor
of Dermatology
Lewis Katz School of Medicine,
Temple University
Philadelphia, PA

Andrew F. Alexis, MD, MPH
Former Chair, Department of Dermatology
Mount Sinai Morningside and Mount Sinai West
New York, NY

Seemal Desai, MD, FAAD
Clinical Assistant Professor
Department of Dermatology
University of Texas Southwestern Medical Center
Dallas, Texas, USA
Innovative Dermatology, PA

Valerie Harvey, MD, MPH
Hampton University Skin of Color
Research Institute
Hampton Roads Center for Dermatology
Newport News, VA

Structural Racism in Dermatology Workforce What is the Magnitude of the Problem?

Black dermatologists
3% of dermatologists but
12.8% of US population

Hispanics dermatologists
4.2% of dermatologists but
16.3% of US population

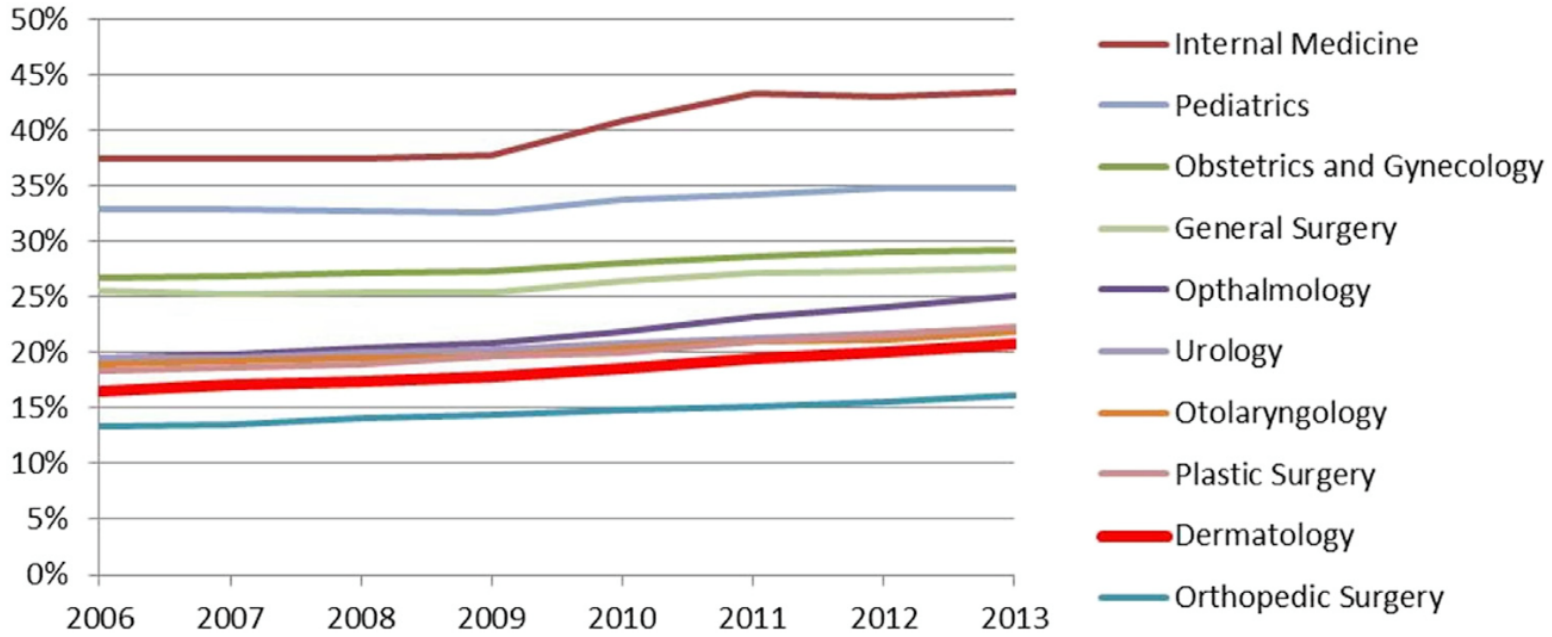

Fig 1. Total minority representation in dermatology versus other fields, 2006-2013, including Hispanics, African Americans, Asians, American Indians/Alaskan Natives, and Native Hawaiians/Pacific Islanders.

Pandya A, et al. Increasing racial and ethnic diversity in dermatology: A call to action. *J Am Acad Dermatol* March 2016;74(3):584-587.

Dr. Susan Taylor

Structural Racism in Dermatology Workforce
Why Does Workforce Diversity Matter?

- Diversity in the medical workforce improves patient care and race-concordant visits are longer and have higher ratings
- Minority physicians are more likely to
  - Care for patients of their own race or ethnicity
  - Practice in areas that are underserved
  - Care for patients who report poor health status
  - Have patients with Medicaid insurance or none

Dr. Susan Taylor

L.A. Cooper, D.L. Roter, R.L. Johnson, D.E. Ford, D.M. Steinwachs, N.R. Powe
Patient-centered communication, ratings of care, and concordance of patient and physician race Ann Int Med, 139 (2003), pp. 907-915

Table II. Representation of dermatologic diseases in dark skin*

Diagnosis	Sauer's	Rook	Bolognia	Kang	Fitzpatrick 8th edition	Habif
Common dermatologic diseases						
Acne vulgaris	1/6	1/4	1/17	**0/5**	**0/3**	**0/34**
Alopecia	10/22	1/12	11/29	3/11	2/12	**0/10**
Atopic dermatitis	**0/13**	6/24	8/43	2/4	2/7	2/29
Pityriasis rosea	2/9	**0/2**	2/7	**0/9**	**0/2**	**0/8**
Psoriasis	2/11	2/28	3/41	3/18	1/14	**0/16**
Tinea infection	3/14	3/8	9/43	4/14	5/25	**0/28**
Syphilis, secondary	7/12	2/4	3/16	10/13	2/6	2/3
General medical diseases with racial or ethnic predisposition						
Sarcoidosis	1/3	1/13	9/13	**0/2**	1/5	**0/0**
Erythema dyschromicum perstans	**0/0**	**0/0**	**0/2**	**0/0**	**0/0**	**0/0**
Cutaneous amyloid	**0/0**	1/8	1/6	**0/0**	**0/6**	**0/0**

*Values are reported as dark skin pictures/total number of pictures for each disease. See Table I for full citation details of the analyzed textbooks. Diseases with no dark skin representation are marked in bold.

Ademide Adelekun et al. J Am Acad Dermatol 2020 Apr 23;S0190

Dr. Andrew Alexis

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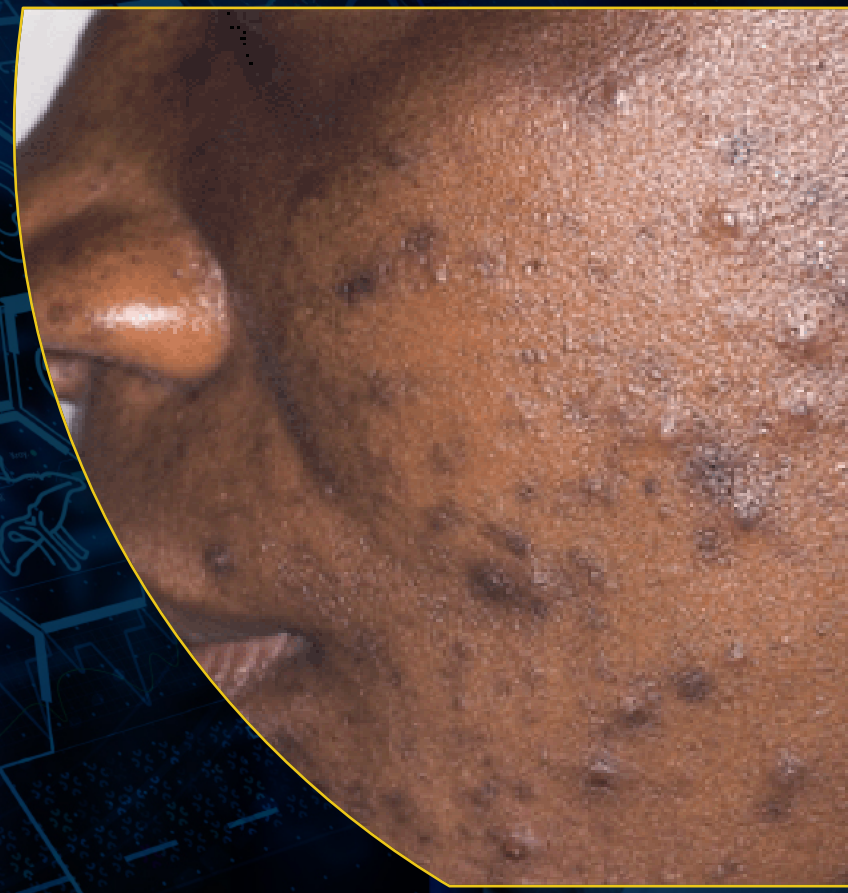
Racial Disparities in Dermatology

Acne

Dr. Susan Taylor

Acne Vulgaris Treatment Considerations

- Early and effective treatment is key to reducing long-term sequelae.
- Waiting to get acne under control first before chasing down PIH is a disservice to patients.
- Acne can be multifactorial, consider therapies that effectively manage underlying diseases.
- Patients may be prone to PIH from irritation of topical medications.



Post-inflammatory Hyperpigmentation

- The most important and distinguishing sequela of acne in skin of color is post-inflammatory hyperpigmentation (PIH)
  - Results from an abnormal release or overproduction of melanin after cutaneous inflammation.
- Studies demonstrate PIH occurs more frequently and appears more noticeably in patients with darker skin hue (Fitzpatrick skin types III–VI).
- A psychological factor is persuading the patient that treatment is needed for acne as well as PIH.

Callender VD, Alexis AF, Daniels SR, et al. Racial differences in clinical characteristics, perceptions and behaviors, and psychosocial impact of adult female acne. J Clin Aesthet Dermatol. 2014;7:19-31.

SPF for Post-inflammatory Hyperpigmentation

- Mineral sunscreen ingredients form a physical barrier on the skin to help reflect UV rays
- Chemical sunscreen ingredients penetrate the top layers of the skin to absorb UV rays before they can damage the skin
- Non-comedogenic formulations can help PIH and reduce acne exacerbation

FDA Approved Ingredients
Mineral (physical) sunscreen: • Zinc oxide • Titanium oxide
Chemical sunscreen: • Oxybenzone • Avobenzone • Octisalate • Octocrylene • Homosalate • Octinoxate

Tolerability of Topical Agents

- It is important to consider the potential risk of irritant contact dermatitis, which may also result in PIH
- To address this concern in patients of color, it is advisable to start with low concentrations and more tolerable formulations
- Typically, the use of a cream vehicle is more tolerable than an alcohol-based gel, especially in dry/sensitive skin types
- Another approach is alternate-day dosing, usually at night which can then be titrated up as tolerated

Topical Retinoids

- Treat acne and PIH
- Approved retinoids: tretinoin, adapalene, tazarotene, trifarotene
  - Adapalene gel 0.1% is OTC for ~ $12-15
- Modifies abnormal follicular keratinization, may be anti-inflammatory
- Dose and formulation dependent adverse effects
  - Irritation may occur initially
  - Erythema, dryness, peeling, burning, and cutaneous edema
- Slowly titrate upward beginning with application only on M-Th nights for 4 weeks, then increase to M-W-F nights for 4 weeks, then to M through F
- Apply a pea-size dot to the entire face (1 pea, not 4)

Antibiotics for Acne

- Oral antibiotics
  - Minocycline and doxycycline are the most prescribed antibiotics for acne
  - Not FDA approved for acne
  - Inhibit *P. acnes*
  - Anti-inflammatory: inhibits neutrophil chemotaxis, cytokines, and (MMP)-9
  - Dosage range of 100-200 mg/day
- Adverse effects:
  - GI intolerance
  - Drug eruption
  - Tetracyclines - may have photosensitivity
  - Minocycline - rare autoimmune disorders (lupus- like changes, hepatitis, arthritis, thyroiditis, or polyarteritis nodosa)
- Topical antibiotics
  - Erythromycin (solution, gel, pads)
  - Clindamycin (solution, gel, pledgets)
  - Slow to act, best in combination with BPO or retinoids
  - Resistance more likely with single agent

Salicylic Acid Peels may improve Acne and PIH

- Asian patients with mild-moderate acne, N=45
- Three study groups treated biweekly for 6 sessions:
  - 35% glycolic acid
  - 20% salicylic-10% mandelic acid
  - phytic acid
- Reduction in acne score at the end of 12 weeks in the three study groups was 70.55%, 74.14%, and 69.7%, respectively.
- A significant decline was observed in the postacne hyperpigmentation index in all the three study groups at the end of 12 weeks

Sarkar R, Ghunawat S, Garg VK. Comparative Study of 35% Glycolic Acid, 20% Salicylic-10% Mandelic Acid, and Phytic Acid Combination Peels in the Treatment of Active Acne and Postacne Pigmentation. J Cutan Aesthet Surg. 2019 Jul-Sep;12(3):158-163. doi: 10.4103/JCAS.JCAS_135_18. PMID: 31619887; PMCID: PMC6785964.

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Racial Disparities in Dermatology

Psoriasis

Dr. Andrew Alexis

Clinical Differences

- Survey to 29 dermatologists - opinion leaders in psoriasis – re: clinical characteristics of psoriasis in African Americans
- 66% (19/29) of respondents reported clinical differences in African Americans (including dyspigmentation, thicker plaques, less erythema)
- Clinical features: red-brown color

- NPF Survey - 4,725 respondents (from 2004-2009)
- Greater psychosocial impact of psoriasis in African-Americans than in Caucasians
  - 72% said that psoriasis interfered with their capacity to enjoy life (vs. 54% of Caucasians)
- More severe disease in African-Americans
  - 23% of African American respondents had very severe psoriasis (vs. 8% of Caucasians)

National Psoria[illegible] Psycho-social impact of psoriasis. 2009.
http://www.psoriasis.org/document.php?id=618

Scalp Psoriasis

- Select treatment regimen that is compatible with patient's hair care practices
- Less frequent hair washing frequency in women of African descent (typically once per week to once every other week)
- Daily hair washing, especially with most prescription shampoos, is often associated with increased hair dryness and breakage; it is also very time consuming for most women of African descent due to common styling practices

- Non-topical therapies for severe cases:
  - Etanercept
  - Adalimumab
  - Secukinumab
  - Ixekizumab
  - Apremilast
  - Methotrexate
  - Cyclosporine
  - Acitretin*avoid in women of childbearing potential
  - Excimer laser

Considerations for African American Patients

- Less conspicuous erythema—may appear violaceous, gray, or hyperpigmented
- Postinflammatory hypo- or hyperpigmentation
- Consider potential clinical mimickers of psoriasis: lichen planus, cutaneous lupus erythematosus, sarcoidosis
- Scalp psoriasis in African Americans: Impact of hair texture, styling practices, and washing frequency on selection of topical therapy and severity
- Potential traditional/cultural therapies used before seeking dermatological consultation

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Racial Disparities in Dermatology

Hidradenitis Suppurativa

Dr. Ginette Okoye

Hidradenitis Suppurativa Pathophysiology

- Chronic, debilitating inflammatory disease of the **hair follicle**
  - Apocrine sweat gland involved secondarily
- Post-pubertal onset of painful, recurrent abscesses/boils in the axillae, groin, and anogenital regions
- Tender subcutaneous nodules
  - can persist for days to weeks until they rupture, draining purulent malodorous material
  - after rupture, can remain open and draining for weeks to months
  - frequently reappear in the same location
- Recurrent flares can lead to sinus tract formation, hypertrophic or keloidal scarring and dermal contractures
- Chronic inflammation of HS can lead to lymphatic obstruction and squamous cell carcinoma

Hidradenitis Suppurativa Pathophysiology

Pathogenesis of HS is likely <u>multifactorial</u>

- Hyperkeratinization of the follicular infundibulum leading to follicular occlusion
  - The dilated follicle ruptures, spilling keratin and bacteria into the dermis → inflammation
- Bacterial colonization/superinfection
- Genetic predisposition
- Obesity
- Smoking
- Hormonal influences: androgens
- Defects or alterations in host immunity

- Comorbidities:
  - Pyoderma gangrenosum
  - Inflammatory bowel disease
  - Cardiovascular disease
  - Musculoskeletal symptoms
  - Metabolic syndrome
  - Depression, Anxiety, Suicidality
  - Squamous cell carcinoma

Hurley Stage I
Acute nodule / “abscess”

Hurley Stage II
Sinus tracts

Photo courtesy Dr. Katherine Puttgen

Hurley Stage III
Sinus tracts and nodules involving an entire anatomic area; Hypertrophic scars

https://www.clinicaladvisor.com/hidradenitis-suppurativa/slideshow/277/

Disparities in HS

- Higher prevalence in African-Americans
  - Prevalence is 2-3 fold higher than among white patients
  - Black patients are more likely to have severe disease, and are more likely to be hospitalized for HS
- HS associated with low socioeconomic status[2]
  - Black patients with HS are more likely to have lower SES than other groups[3]
  - Patents with more severe disease are more likely to have a lower SES than patients with mild disease

[1]Garg A et al. JAMA Dermatol 2017. ; [2]Deckers IE et al. J Am Acad Dermatol 2016;75:755-9 e1. ; [3]Soliman et al. J Cutan Med Surg. 2019 May/Jun;23(3):334-336.

Race, Socioeconomic Status, and HS

- Do patients with low SES have HS due to factors related to SES, e.g. access to care, differences in diet / nutrition → obesity, microbiome differences, etc.?

AND / OR…

- Do patients with HS have low SES due to the loss of educational opportunities and employment secondary to pain, drainage, and the medical & psychiatric comorbidities associated with HS?

Management of HS

Microbiome support?

Laser hair removal

HS Treatment Pyramid

Weight reduction: nutrition consult / bariatric surgery
Smoking cessation

Prednisone

Surgery / Deroofing

Oral retinoids: isotretinoin, acitretin

Biologics +/- MTX

Hormonal therapy: Spironolactone, Finasteride / Metformin

Other antibiotics: metronidazole, cipro

Clindamycin 300 TID + Rifampin 300 TID

Doxycycline / Minocycline

Clindamycin 1% lotion/gel/solution Bleach baths

Chlorhexidine 4% wash Benzoyl peroxide 10% wash

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Racial Disparities in Dermatology

Atopic Dermatitis

Dr. Andrew Alexis

- National Survey of Children's Health (NSCH), a large population-based survey of >100,000 families representing all 50 states
- African American children are 1.7 times more likely to have AD than their white counterparts, even when adjusting for household income, parental education level, metropolitan versus rural environment, and health insurance coverage status

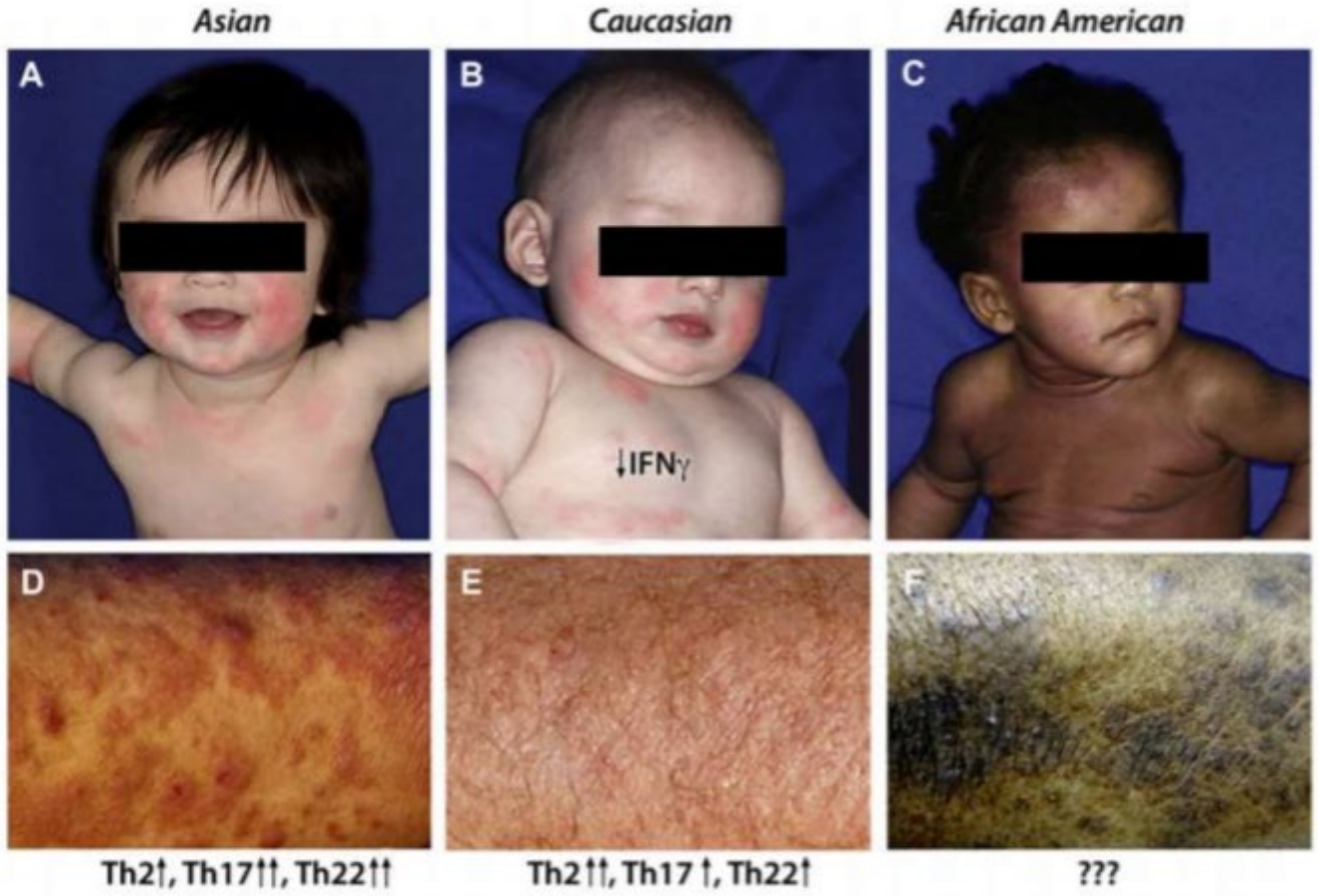
Shaw TE et al. J Invest Dermatol. 2011 Jan;131(1):67

Genetic Differences

- FLG mutations have a significant association with atopic dermatitis in European populations, however populations differences in prevalence have been observed.
- FLG mutations are found in up to:
  - 50% of all European patients with AD
  - 27% of Asian patients with AD

  Korean, Japanese, Chinese, Singaporean, and Taiwanese populations all have specific FLG null mutations unique to their ethnic group, and they rarely exhibit the mutations commonly observed in Caucasians
- A study in 370 African Americans and 433 whites demonstrated that only 5.8% of blacks (compared to 27.5% of whites) had at least one of the four most common FLG null mutations

Immunophenotypic Differences

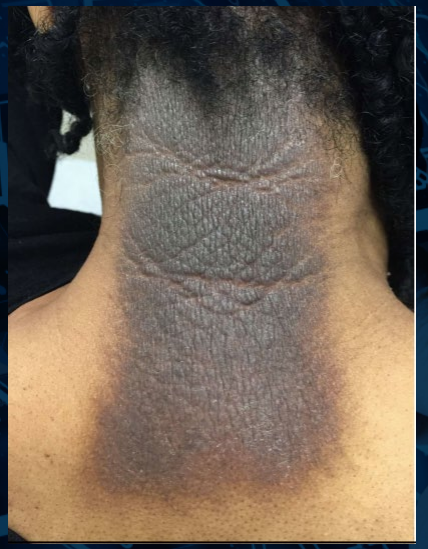


Leung DY. J Allergy Clin Immunol. 2015 Nov;136(5):1265

Clinical Differences

Erythema less visible
– masked by pigment

Follicular
accentuation



Lichenification

Dyspigmentation
Pruritus
– more severe?

Approach to Treatment

- Avoid under-treatment – to prevent long-term sequelae (e.g. dyspigmentation)
- Aggressively target inflammation
- Effectively manage pruritus (risk of scratch induced dyspigmentation)
- Minimize duration of potent topical corticosteroids – risk of hypopigmentation (among other side effects)
- Barrier protection – liberal use of moisturizers and/or barrier repair “devices”

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Racial Disparities in Dermatology

Pediatric Atopic Dermatitis

Dr. Candrice Heath

Disparities in Atopic Dermatitis

- United States:
  - 25% of children
  - Onset most commonly between 3-6 months old
    - 60% have symptoms by age 5 years
- African American children were more likely to be exposed
  - Lower household income
  - Lower parental education attainment
  - Lack of home ownership
  - Child living between to addresses
  - Exposure to smoking

- Higher prevalence in skin of color
- More treatment resistant disease in SOC
- Non-Hispanic Black children and Hispanic children had greater odds of persistent AD than non-Hispanic white children
- Atopic dermatitis prevalence and persistence were highest in US urban children who were **female or Black**.
- Urban children with persistent AD were more likely to have poor QOL and asthma.

Communication with Parents/Caregivers

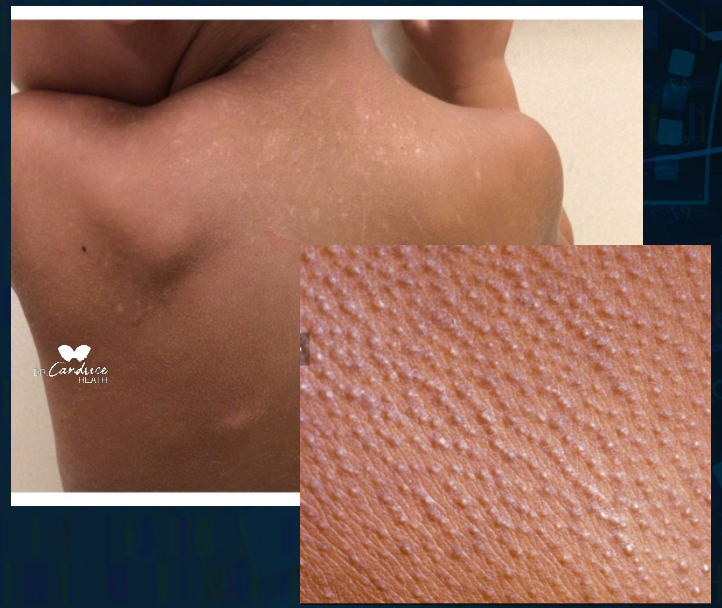
Parents bring their frustrations with hyperpigmentation to the pediatric visit!

Verbalize:

1. You see the pigmentation change
2. Explain that controlling the AD improves PIH
3. Remaining pigmentation can be treated

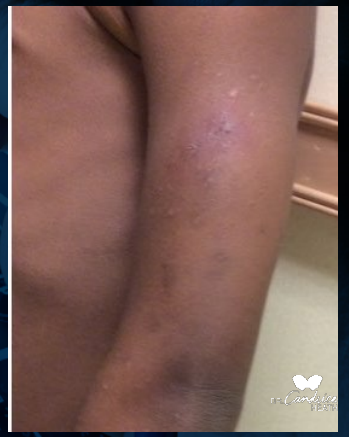
Clinical Differences

- Papular and Follicular Eczema



- ‘close your eyes’ technique to determine flare

- Erythema may be barely / not perceptible



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Racial Disparities in Dermatology

Pigmentary Disorders

Dr. Seemal Desai

Post-Inflammatory Hyperpigmentation: Treatment Options

- First and foremost:
  - Treat any underlying dermatoses and stress the importance of sun protection
- Topical retinoids
- Azelaic acid
- Hydroquinone
- Chemical Peels
- Cosmeceuticals
- Reassurance and Time

Melasma: Treatment Options

- Topical retinoids & combination therapy
- Azelaic acid
- Hydroquinone
- Chemical Peels
- Cosmeceuticals
- Lasers
- Dermabrasion
- Reassurance and Time

Drug Safety

Hydroquinone

- Hydroquinone remains the gold-standard, and non-HQ based therapies remain second line and/or adjunctive
- No substantial evidence to prove its carcinogenicity
- Take the time to discuss long term use with each of your patients!

Azelaic Acid

- Dicarboxylic acid that has selective cytotoxic effects
- Inhibits tyrosinase and mitochondrial respiratory enzymes
- Minimal side effects of erythema, pruritus, and mild burning

Drug Safety

Tranexamic Acid

- Contraindications:
  - Current/past DVT/PE/clotting disorder/anti-coagulant medications
  - Pregnancy/breastfeeding
  - Smoking
  - Renal/cardiac/pulmonary disease
- Dosing:
  - Most effective dosing seems to be at 250-500 mg daily
  - Topical, oral, and intradermal forms

Glutathione

- Potent anti-oxidant → indirect inactivation of tyrosinase
- Assists in converting eumelanin to phaeomelanin
- Typically used oral
- Also being given IV in Asia
- Still controversial due to bioavailability, but some promising results in studies

Takeaways for Melasma Treatment

- Topical Therapy remains the first line treatment of melasma
- Hydroquinone remains the gold standard
- Second line topicals, though off-label, should be considered
- Tranexamic acid is an exciting new step in melasma treatment

Chemical Peel Cocktails

- Jessner's + TCA 20% for full face acne scars, especially when not deep boxcar or ice pick
  - Can do in skin of color
  - One layer after another
- Salicylic acid 30% and 10-20% Mandelic for Acne Vulgaris
  - Works great for acne and also rejuvenation
  - Synergy between alpha and beta hydroxy
- TCA 10% immediately after microneedling for dark circles
  - Procedure only lasts about 5 minutes
  - Depth of 0.5mm → SHALLOW

Vitiligo: Treatment Options

- Topicals including steroids, vitamin D analogues, calcineurin inhibitors
- Depigmentation
- Systemic treatment
  - JAK inhibitors (ruxolitinib 1.5% cream)
- Phototherapy
- Surgical Treatment
- Psychological therapy

- If treatments fail → Analyze patient's desires!

Types of Vitiligo

- Active/Unstable Vitiligo
  - Depigmentation spreading more than 2% BSA in one month
- Chronic Vitiligo
  - Depigmentation present for at least 1 year with no h/o spontaneous repigmentation
- Refractory Vitiligo
  - Disease that is poorly responding to therapy → 25% repigmentation

Depigmentation Options

- Traditional:
  - Monobenzyl Ether of Hydroquinone (MBEH)
  - Monomethyl Ether of Hydroquinone/4-Methoxyphenol
  - 88% Phenol
  - Cryotherapy
  - Laser treatment → Q-Switched alexandrite & Q-Switched Ruby
- Newer:
  - Imatinib
  - Imiquimod
  - Diphencyprone

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Racial Disparities in Dermatology

Melanoma

Dr. Valerie Harvey

Stage-specific worsening of racial/ethnic disparity

Table II. Unadjusted hazard ratio and 95% confidence intervals for melanoma-specific survival of different racial/ethnicity groups compared with non-Hispanic whites in the Surveillance, Epidemiology, and End Results cohort and across 3 diagnostic time periods for different stages for cutaneous melanoma

		<2000	2000-2009		≥2010	
	Race	HR (95% CI) for MSS	HR (95% CI) for MSS	*P* for interaction	HR (95% CI) for MSS	*P* for interaction
Localized stage*						
	Hispanic	0.93 (0.79-1.09)	1.24 (1.08-1.43)	.007	1.35 (1.06-1.72)	.012
	NHB	1.62 (1.22-2.15)	2.26 (1.70-3.02)	.10	4.29 (2.84-6.47)	<.001
	NHAPI	1.18 (0.89-1.57)	1.47 (1.10-1.96)	.29	2.21 (1.42-3.43)	.020
	NHAIAN	0.82 (0.44-1.53)	1.02 (0.58-1.80)	.61	1.98 (0.94-4.15)	.076
Regional stage*						
	Hispanic	0.98 (0.81-1.18)	1.24 (1.10-1.40)	.042	1.46 (1.22-1.75)	.003
	NHB	1.72 (1.30-2.27)	1.48 (1.18-1.84)	.41	1.80 (1.28-2.52)	.84
	NHAPI	1.20 (0.90-1.59)	1.31 (1.06-1.62)	.61	1.24 (0.82-1.88)	.88
	NHAIAN	2.25 (1.24-4.07)	1.15 (0.72-1.83)	.080	2.72 (1.57-4.69)	.65
Distant stage*						
	Hispanic	0.80 (0.64-1.00)	1.01 (0.87-1.17)	.088	1.14 (0.96-1.35)	.014
	NHB	1.18 (0.89-1.56)	0.78 (0.60-1.00)	.032	0.96 (0.70-1.32)	.34
	NHAPI	1.19 (0.87-1.63)	1.02 (0.80-1.30)	.45	1.69 (1.28-2.25)	.10
	NHAIAN	1.51 (0.72-3.16)	0.73 (0.35-1.54)	.18	0.82 (0.39-1.71)	.25
All stages*						
	Hispanic	1.13 (1.02-1.25)	1.61 (1.49-1.73)	<.001	1.96 (1.76-2.17)	<.001
	NHB	2.32 (1.99-2.72)	2.88 (2.51-3.31)	.044	3.85 (3.16-4.68)	<.001
	NHAPI	1.77 (1.51-2.07)	2.23 (1.95-2.55)	.029	2.76 (2.27-3.36)	.001
	NHAIAN	1.30 (0.91-1.86)	1.34 (0.99-1.81)	.89	2.09 (1.45-3.01)	.067

Journal of the American Academy of Dermatology DOI: (10.1016/j.jaad.2020.08.097)

Differences in clinical presentation

Gender	Majority of NHB and Hispanic patients were female
Anatomic location of primary site	Lower limb or hip most common primary site for Hispanic, NHB, NHAPI
Histological subtype	NHB have higher percentage of ALM compared to other groups
Mucosal involvement	Higher percentage of minorities with mucosal melanoma

https://doi.org/10.1016/j.det.2019.05.009

Social determinants of melanoma disparities

- Disparities are symptoms of underlying social and economic determinants.
- Social determinants of Health (SDOH)
  - Five domains:
    - Economic stability (employment, income)
    - Education and access (higher education, literacy, language)
    - Health care access and quality (health coverage)
    - Built environment (housing, transportation, safety)
    - Social and community context (social support systems)

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Racial Disparities in Dermatology

Cutaneous T-Cell Lymphoma

Dr. Ginette Okoye

Types of Cutaneous T-Cell Lymphomas

Indolent clinical behavior

1) **Mycosis fungoides (MF)***

2) Mycosis fungoides variants
   - Folliculotropic MF
   - Pagetoid reticulosis
   - Granulomatous slack skin

3) Primary cutaneous CD30-positive lymphoproliferative disorders
   - Primary cutaneous anaplastic large cell lymphoma (C-ALCL)
   - Lymphomatoid papulosis (LyP)

4) Subcutaneous panniculitis-like T-cell lymphoma (SPTCL)

5) Primary cutaneous CD4-positive small/medium pleomorphic T-cell lymphoma

Aggressive clinical behavior

•1) Sézary syndrome (SS)

•2) Adult T-cell leukemia/lymphoma (ATLL)

•3) Extranodal NK/T-cell lymphoma, nasal type

•4) Primary cutaneous CD8-positive aggressive epidermotropic cytotoxic T-cell lymphoma

•5) Primary cutaneous gamma/delta T-cell lymphoma (PCGD-TCL)

•6) Primary cutaneous peripheral T-cell lymphoma (PTCL), unspecified

Health Disparities in CTCL

- Mycosis Fungoides in African Americans:
  - Higher incidence
  - Presents at a younger age
  - Diagnosed at later disease stages
  - Higher mortality rate
  - African-American women diagnosed before age 40 have a poor prognosis


STUDY

Incidence of Cutaneous T-Cell Lymphoma in the United States, 1973-2002

Vincent D. Criscione, AB; Martin A. Weinstock, MD, PhD

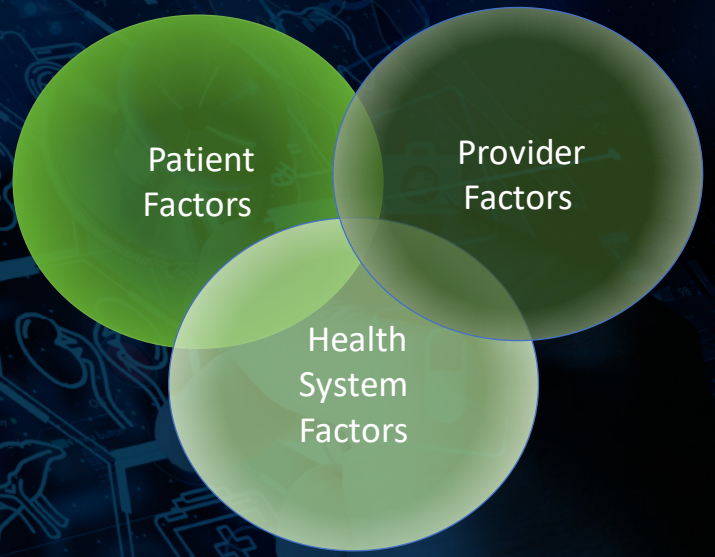
- "Incidence of MF is higher among blacks (9.0×10^{-6}) than among whites (6.1×10^{-6}) and was higher among men than among women."
- "The male-female IRR was lowest among blacks (1.5) and highest among the other racial groups (2.7)."
- Black patients with MF more likely to present with more advanced disease
  - i.e. T3 - T4 (OR 1.72)
  - T3=tumors / T4=erythroderma
- Black, Asian/Pacific Islander, and Native American patients with MF more likely to present at a younger age
  - Mean age at diagnosis in white patients → 59.2 y.o.
  - A/PI → 51.3
  - Black → 51.5
  - Native American → 53.8

Wilson LD, Hinds GA, Yu JB. Clin Lymphoma Myeloma Leuk. 2012 Oct;12(5):291-6.

Health Disparities in CTCL

- Patient and Provider education about clinical presentation of MF in skin of color

- Access to dermatologists
  - Depends on insurance type
  - Expensive specialist co-pays
  - Too few dermatologists, varies by geography



- Cost/Availability of MF therapy
  - Expensive phototherapy co-payments
  - Access to phototherapy, extra-corporeal photopheresis (ECP), total skin electron beam radiation therapy
  - Missing work for treatment, e.g. TIW phototherapy

- Bias, attitudes and beliefs of providers

Clinical Presentation in Skin of Color

- **Pigmentary changes more common/easier to appreciate than erythema**
  - Hyperpigmentation, Hypopigmentation, Depigmentation, Polymorphic pigmentation, Lichenification
- **Easily mistaken for other dermatoses:**
  - Atopic dermatitis, psoriasis, lichen planus pigmentosus, inflammatory vitiligo, tinea versicolor
- **Erythroderma more difficult to appreciate**
  - May present as diffuse lichenification or diffuse skin darkening
- **Facial lesions** may be more common

Photo courtesy Peter Heald, MD

Treatment of Mycosis Fungoides

- Management of mycosis fungoides depends on stage.
- Limited Stage (i.e. IA – IIA)

  Skin directed therapies:

  - Potent topical corticosteroids (e.g. clobetasol)
  - Phototherapy: Narrowband UVB, PUVA
  - Topical bexarotene, topical nitrogen mustard
  - Radiation therapy (*TSEB: total skin electron beam)

- Advanced stage (IIB – IV)

  Systemic agents:

  - IFNa, oral bexarotene
  - Extracorporeal photopheresis (*ECP)
  - vorinostat, denileukin diftitox, histone deacetylase inhibitors, antifolate analogs, alemtuzumab

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Racial Disparities in Dermatology

Non-Scarring Hair Disorders

Dr. Amy McMichael

Top Diagnoses in African American Patient Visits to Dermatologists

Diagnosis	ICD-9 Code	No. of Visits	% of Visits
Acne	706.1	5,720,000	22.1%
Unspec. dermatitis	692.9	3,640,000	14.0%
Seb dermatitis	690.10	1,990,000	7.7%
Atopic derm	691.8	1,590,000	6.1%
Dyschromia	709.0	1,290,000	5.0%
Psoriasis	696.1	950,000	3.6%
Alopecia	704.00	920,000	3.6%
Keloid scar	701.4	830,000	3.2%
Viral warts	078.1	780,000	3.0%
Sebaceous cyst	706.2	780,000	3.0%

Davis SA, et al. J Drugs Dermatol 2012

Damaging hair care practices

- Chemical straightening agents remove the mono-molecular layer of fatty acids covalently bound to the cuticle, including 18-methyl eicosanoic acid, which is important to prevent penetration of water into the hair shaft.
  - Most likely to cause *catastrophic* damage to the hair
- Hair dye less likely to lead to *catastrophic* hair breakage in one use but damage is more due to frequency of use leading to cumulative damage
  - Bleach > Permanent colorants > Demi-permanent > Semi-permanent >Temporary
- Thermal straightening with or without chemical process causes hair shaft weakening
  - Flat irons and curling irons can cause much more damage than blow dryers

Khalil EN (1986). Cosmet Toil 101:51-58.

Swee W, Klontz KC, Lambert LA (2000). Arch Dermatol Sep;136(9):1104-8.

Approach to Hair Breakage

- Check underlying abnormalities (Iron levels, thyroid, nutrition, etc)
- Give the hair a rest!
  - Consider stopping chemical relaxer, color, or relaxer for 6-12 months
  - Place a hair weave that is not tight and **will allow hair care**
  - Loose braids or wig
  - Natural hair but do not straighten with heat
- Serial trimming of hair (every 6-8 weeks)
- Use heat protectant products on the hair before styling
- Layering moisturizing regimen
  - Start with moisturizing shampoo and conditioner (should state for dry, damaged hair)
  - Next apply a leave-in conditioner with coating agents to wet hair (dimethicone-coating agents)
  - Add a leave-in conditioner (oils) to dry hair (after washing weekly and then as needed daily)
- Discuss the long wait for improvement

OILs Can Be Bad for hair and scalp

Coconut oil	• **Effective hair lubricant and moisture sealant** • **Comedogenic**
Jojoba Oil	• Works well to lightly coat the hair shaft and lubricate hair • Similar properties to sebum in lubricating hair shafts • Can induce **contact dermatitis**
Argan Oil	• Can be used to protect the integrity of the hair fiber during harsh chemical processes such as hair coloring. It also gives shine and lubrication to the hair shafts. • The allergenicity of argan oil is rare, but reports of it do exist.
Castor Oil	• Effective at lubricating and adding shine to hair shafts, as well as softening the hair. • Known **skin irritant** • Has been documented to cause acute hair felting in one case report
Olive Oil	• Effective at softening the hair, and providing lubrication and shine. • Known **skin irritant** that has been .
Tea Tree Oil	• Tea tree oil is effective at soothing the scalp and improving dandruff, but given its **irritating properties**, it is best avoided
Shea Butter	• Good emollient • Can safely be used to lock in moisture in hair shaft • Should not be used for wet combing as can cause **damage to the hair shaft**

1. Rele AS, Mohile RB. J Cosmet Sci. 2003 Mar-Apr;54(2):175-92
2. Uwakwe L, McMichael, The Dermatologist, 2018

Seborrheic dermatitis treatment

- Discuss frequency of shampoo
- Make a contract with patient to **increase washing to minimum of every 2 weeks**
- Use products for "textured hair" or with "moisturizing" in the title, those developed for hair in African American patients
  - Zinc pyrithione #1
  - Selenium sulfide
  - Tar
  - Rarely use ketoconazole in African American women
- Apply medicated shampoo to the scalp **only** to minimize dryness of hair shafts
- Since conditioners can wash off the active ingredients in therapeutic shampoos, anti-dandruff conditioners are recommended
- Stop home use of pomades/oils to scalp

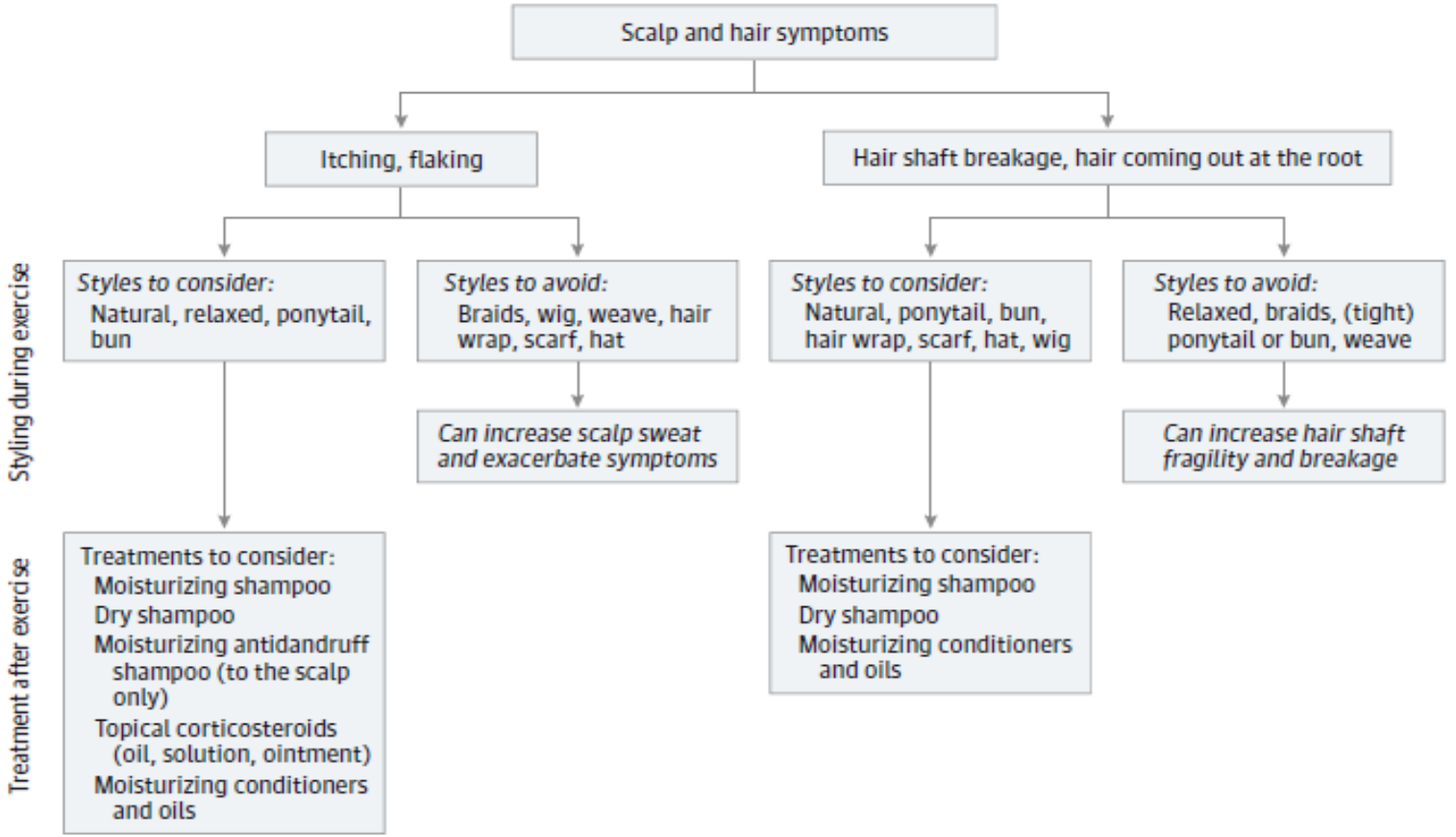
Seborrheic dermatitis treatment

- Potent or ultrapotent topical steroids to scalp 3-4 times/week
- Mid-potency topical steroid oil weekly or more
- For face:
  - Low potency topical steroids, tapering to off
  - Topical calcineurin inhibitors
  - Anti-yeast topicals, like ketoconazole or econazole

Algorithm for managing breakage and seborrheic dermatitis

ahn c, et al Jama Derm 2016

Figure. Ideal Hair Care During Strenuous Physical Activity Based on Hair and Scalp Symptoms



Traction alopecia

- Prevalence estimated at 1% in London population and 37% in S. African population
- Observed to be much higher prevalence in women and girls of African descent
- High risk in those using chemical relaxer and tight braiding
- More than 80% with traction alopecia have experienced pain with hair styles
- Mechanism thought to be mechanical tension on the hair shaft

Khumalo NP et al. BJD 2007
Wright DR et al. JAAD 2011
Child FJ et al BJD 1999
Khumalo NP et al Arch Derm 2006

Treatment for traction alopecia

- Decrease friction and traction behaviors to the area
- Anti-inflammatory treatments
  - Mid-potency topical steroids 3-4 times per week
  - Intralesional triamcinolone 5 mg/cc to the affected areas for 2-3 cycles
- Topical minoxidil 5% daily
- Surgical correction
- Follow improvement with photos
- Discuss the fragility of regrowth

Uwakwe L, DeSouza B, Garza-Tovar, McMichael A. JDD. 19(2):128-130

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In Partnership with SOCS

Racial Disparities in Dermatology

Scarring Hair Disorders

Dr. Andrew Alexis

Unmet Needs in Hair Disorders for SOC Patients

- Delays in diagnosis → Long-term or permanent sequelae
- Limited coverage in educational materials → Educational gaps
- Limited research into new therapies → Limited treatment options

Central Centrifugal Cicatricial Alopecia

- Hot comb alopecia, Follicular degeneration syndrome
- Begins on crown
- Secondary to long-term chemical processing, thermal straightening, tension
- Primary Cicatricial Alopecia – lymphocytic
- Genetic predisposition

Research Findings: CCCA and SOC

- Self report of traction associated hair styles was significantly higher in those with CCCA (ie. Grade ≥ 3 on photographic scale) vs. those without
- Mutations in PADI3 (an enzyme that post-translationally modifies other proteins important for proper hair-shaft formation) were associated with CCCA
- African-American women with CCCA had almost a five-fold increased odds of having uterine leiomyomas compared to controls

Kyei A et al. Arch Dermatol. 2011 Apr 11.

Malki L et al. N Engl J Med 2019;380:833

CCCA Treatment Recommendations

- Goals of therapy
  - Stop progression of hair loss/limit further scarring
  - Promote hair growth in areas with viable follicles
  - Relief of symptoms

- Decrease potential exacerbating factors: chemical relaxers, thermal straightening/styling, traction
  - Initiate treatment regimen based on clinicopathologic correlation
  - Stop progression of hair loss/limit further scarring
  - Promote hair growth in areas with viable follicles
  - Relief of symptoms

- Therapies:
  - Anti-inflammatory agents
  - Minoxidil
    - Limit progression of hair loss/limit further scarring
    - Promote hair growth in areas with viable follicles

CCCA Treatment Recommendations

▪ No inflammation	→	Limit thermal, chemical, and mechanical trauma + Topical minoxidil
▪ Inflammation present	→	As above + corticosteroids and/or antibiotics
▪ End-stage scarring/ Treatment failures	→	Hair transplantation, Wigs, camouflage

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Racial Disparities in Dermatology

Pediatric Hair and Scalp Disorders

Dr. Candrice Heath

LiVDerm

Understanding the Common Hair Care Routine of a Child with Tightly Coiled Hair

- Remove current style (30 min – 3 hrs depending on style)
- Wash
- Condition
- Detangle (15 min with large tooth comb)
- Rinse
- Leave-in-conditioner
- Detangle (1 hr)
- Style (1-3+ hrs)

Tinea Capitis

- Differential diagnosis:
  - Scalp hyperkeratosis
  - Seborrheic dermatitis
  - Atopic dermatitis
  - Psoriasis
  - Sebopsoriasis
- Treatments
  - Griseofulvin microsize (135mg/5mL)
    - 20-25mg/kg/day x 8-12 weeks
  - Terbinafine
    - 10-20 kg : 62.5 mg/day
    - 20-40 kg: 125 mg/day
    - >40 kg: 250mg/day

Gupta AK. Drummond-Main C. Meta-Analysis of Randomized, Controlled Trials Comparing Particular Doses of Griseofulvin and Terbinafine for the Treatment of Tinea Capitis. *Pediatr Dermatol* 2013;30:1-6. Chen X et al. Systemic antifungal therapy for tinea capitis in children. Cochrane Database Syst Rev. 2016

Shampoo and Tinea Capitis Treatment

- Antifungal shampoos
  - May help with household spread
  - decrease transmissible fungal spores
- Conditioners
  - May help with household spread
  - Household should use it as well
- Watch out for hair dryness → breakage
- Parent may apply antifungal shampoo directly to scalp (ex. Ketoconazole shampoo)

→ wait 5-10 minutes

→ rinse

→ shampoo scalp & hair with moisturizing shampoo

→ condition with moisturizing conditioner

→ style the hair as desired

Traction Alopecia

- Very common, may see pustules at area of tension
- Limit hair pulling and tight styles to avoid hair loss
- When discussing hair styling practices with parents:
  - Compliment, discuss, suggest!

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Racial Disparities in Dermatology

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