Skin Conditions in Skin of Color

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Learning objectives

- Define ethnic skin/skin of color
- Discuss skin and hair disorders that disproportionately affect patients of color
- Discuss cultural practices that may have cutaneous sequelae
- Medication/procedural considerations in skin of color
Fitzpatrick Skin Type

- Ethnic skin or skin of color
  - Broad range of skin types and complexions that characterize individuals with darker pigmented skin
  - Includes African, Asian, Latino, Native American, and Middle Eastern decent
  - Encompasses Fitzpatrick skin types IV - VI
Skin of color patients have distinct:

- Cutaneous and hair characteristics
- Cutaneous disorders and reaction patterns
  - Cutaneous malignancy
  - Pigmentary disorders
  - Cutaneous manifestation of systemic disease
  - Skin disorders without systemic disease
  - Hair/follicular disorders
- Diverse cultural/religious practices affecting the skin
Cutaneous malignancy
Skin cancer

- Incidence of both non-melanoma skin cancer and melanoma
  - 20% to 30% of all neoplasms in Caucasians
  - 2% to 4% of all neoplasms in Asians
  - 1% to 2% of all neoplasms in blacks and Asian Indians

Risk factors

- Ultraviolet (UV) radiation from sunlight
- Scarring processes/chronic injury (e.g. burns, non-healing leg ulcers, skin lupus, radiated skin)
- Depressed immune system

Disparity noted with greater morbidity and mortality

Non-melanoma skin cancers present with atypical clinical presentations

- Hispanic and Asian (BCC > SCC)
- AA (SCC > BCC)
- Pigmented
- Can occur in sun protected areas (lower legs and perianal)
Melanoma:

- Acral lentiginous melanoma is the most common subtype in Blacks
- Feet, palms, fingernails, toenails, and inside of the mouth
- Poor prognosis, high mortality secondary to its propensity for delayed diagnosis and deep invasion at presentation
Melanonychia

- Melanonychia (nail streaks):
  - Occurs more commonly in dark-skinned individuals
  - Nearly all Afro-Caribbean's will develop black-brown pigmentation of the nails by the age of 50
  - Melanocytic (pigment) activation or hyperplasia
Cutaneous lymphoma

- Mycosis fungoides is a chronic cutaneous T-cell lymphoma
  - Blacks are thought to be affected twice as often as Whites
  - Atypical hypopigmented presentation which may lead to a delay in diagnosis

Pigmentary disorders
Post-inflammatory hyperpigmentation (PIH)

- PIH is an acquired excess of melanin pigment following cutaneous inflammation or injury
- Tan to dark brown (epidermal melanin) or gray–blue to gray–brown (dermal melanin)
- Can take months to years to improve
- Significant cosmetic and psychosocial consequences
Melasma

- Dark patches on sun-exposed areas of skin (forehead, cheeks, upper lip, and nose)
- Common in premenopausal women of color
- Underlying causes: genetics, hormones, and sunlight
- Shade of brown is in part determined by the depth of pigment in the skin
Vitiligo

- Acquired pigmentary disorder characterized by depigmentation from loss of epidermal melanocytes
- Equal incidence in all skin types
- Disfiguring for those with darker skin types
Hair Care and hair disorders in skin of color
Hair Care and hair disorders in skin of color

- Hair appearance and style play an important role
- Styling practices are determined by individual hair characteristics and preferences
  - Current and historic trends
  - Ease and convenience of styling
  - Climate/season, occupation or activities
  - Health and maintenance of hair

Hair phenotype

- Evaluation of hair among different ethnic groups demonstrate no biochemical differences
- Structural differences do however exist
  - Elliptical cross section shape
  - Hair follicle forms tight curls
Properties of Afro-ethnic hair

- Afro-ethnic hair
  - Easily forms knots
  - More likely to break
  - Develops frayed tips
  - Lower water content
  - Lower amounts of sebum (natural protective oils)
Heat treatment/Thermal straightening

- “Pressing”, “Press” or “Hot combing”
- Thermal manipulation of the hair unit temporarily disrupts the hydrogen bonds of keratin (keratin hydrolysis)
- Heating devices: hot comb, hot iron, flat iron, curling iron
- Heating element: stainless steel, ceramic, titanium
- Reaches temperatures of 150 – 500°C
- Hair reverts back to native state with water or humidity

Heat treatment/Thermal straightening

- Increases dryness
- Bubble formation
- Weak points
- Split ends
- Hair breakage
Chemical hair straightening

- Chemical straightening/‘relaxing’ of the hair unit permanently alters the disulphide bonds of keratin
- Achieved through alkaline based products:
  - Lye-based versus non-lye straighteners
  - Alkaline pH allows penetration of chemical straightener through the hair cuticle into cortex

Source:
Stephanie Henderson-Brown, et al. Advanced Hairdressing (Level 3)
Chemical hair straightening

- Chemical relaxing
  - Loss of tensile strength of the hair shaft
  - Increased fragility of the hair shaft
  - Scalp contact irritation
  - Scalp chemical burns
  - Possibly scarring hair loss
Hair styling practices

- Hair extensions
  - Human hair
  - Synthetic hair
- Extensions can be clipped, pinned, crocheted, cornrowed or braided into hair for added length/body

C. Aguh & G. Okoye. Fundamentals of Ethnic Hair
Natural Hair

- Refers to hair that has not been chemically treated
- Increasing in popularity over the last decade
- Transitioning from chemically treated to natural hair:
  - “Big chop” refers to cutting off all chemically treated hair
  - Simply growing out chemically treated hair
  - “Protective styling” (e.g. braids, weaves, extensions)

Exercise and hair care

- African-American women are least likely to meet recommended physical activity guidelines
  - ~40% report avoiding exercise at times due to hair style
- Increasing self-efficacy to restyle hair after perspiration may help to overcome this barrier:
  - Ponytail, locks, cornrows, braids or natural hairstyles
  - Scarf or hair wrap

Traction alopecia

- Traction alopecia is caused by repeated pulling on the hair
- Presentation
  - Raised bumps around hair
  - Hair thinning in areas of tension
  - When identified early, the styling can be modified and hair will regrow
- Over time, traction alopecia can lead to scarring and become irreversible
Seborrheic Dermatitis

- Chronic inflammatory scalp condition
  - Occurs on the scalp, face, & chest
  - Hypopigmented, hyperpigmented or erythematous plaques

- Risk factors
  - Decreased frequency of hair washing
  - Build up of hair products on the scalp
  - Oils on the scalp can mask the scaling

C. Aguh & G. Okoye. Fundamentals of Ethnic Hair
Hair fragility

- Acquired trichorrhexis nodosa
  - Response of the hair shaft to extrinsic or environmental insults
  - Results in hair breakage or lack of growth
  - Because hair is non-living tissue, total repair of the hair shaft is not possible
  - Management of this form of hair loss involves protecting the hair shaft and minimizing further damage
Central centrifugal cicatricial alopecia (CCCA)

- Chronic, progressive scarring alopecia
- Centered on the crown or vertex
- Gradually expands symmetrically with the most active disease at the periphery
- Some patients complain of itching or burning
- Most commonly seen in women of African descent
Cultural practices
Revised pressured strokes over lubricated skin

- Petechiae
- Ecchymoses
- Linear distribution
- Contact dermatitis
Cupping

- Therapeutic application of heated cups to the skin
  - Circular erythema, edema, ecchymoses & purpura
  - Burns
  - Keloids
  - Suction bullae
  - Mistaken for physical abuse

Moxibustion

- Practice of burning dried moxa
  - Circular burns
  - Mimic signs of physical abuse

Henna tattoo

- Temporary ornamental tattoo
  - Many henna tattoos use “black henna,” a mixture that contains paraphenylenediamine (PPD)
  - Allergic contact dermatitis
  - Postinflammatory skin changes
  - Leukoderma
  - Scarring and Keloid formation

Prayer marks/nodules

- Frictional dermatoses secondary to repeated pressure
Medication & procedural considerations
Medication considerations

- Medication vehicle
  - Ointments versus creams
  - Oils versus solutions
    - Alcohol-based solutions can be drying to hair and not conducive with hairstyling practices
  - Shampoos
  - Sunscreen
Medication considerations

- Caution when prescribing topical medications that can cause irritation or pigmentary changes
  - Topical acne meds
  - Consider prescribing medications that can help with hyperpigmentation
Medication considerations

- Counsel regarding pigmentary risk of medications (e.g. intrallesional steroids)
Medication considerations

- Aggressive control of cutaneous disease to reduce sequelae (e.g. PIH, keloids)
Cryotherapy

- Sensitivity of cell types to cold-induced injury
  - Melanocytes (-4 to -7°C)
  - Keratinocytes (-20 to – 30°C)
  - Fibroblasts (-30 to – 35°C)
Surgery/procedures in skin of color

- Obtain pre-op history
  - History of keloids (avoid trauma resulting from voluntary or elective procedures)
  - Smoking
- Surgery
  - Minimize tension on surgical wound closures
  - Use sutures with low tissue reactivity
  - Suture removal as early as possible
Reducing post-inflammatory hyperpigmentation

- Extensive pre-, intra- and post-operative counseling
- Keep area covered until completely healed
- Sun protection with sunscreen (containing physical blocker) and protective clothing
- Consideration for postponing elective procedures until fall/winter
- Cool compress to reduce inflammation
- Post-op treatment with hydroquinone
Lasers

- Lasers
  - Melanin in the epidermis competes as a chromophore for the laser light

- Complications
  - Dyschromia (hyperpigmentation and hypopigmentation)
  - Paradoxical hypertrichosis
Questions