Ethnic Hair Care Practices: What Every Dermatologist Needs to Know!

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Conflicts of Interest, Disclosures, Financial Relationships

- None
Objectives

- Highlight the unique characteristics of hair in people of African descent (ethnic hair)
- Review common ethnic hair care practices
Relevance

- Patients present to dermatology for their hair and scalp concerns
  - Acne
  - Dyschromia
  - Eczema
  - Alopecia
  - Seborrheic Dermatitis

- Diagnosing and treating certain scalp and hair disorders requires a basic understanding of the patient’s grooming and styling practices

- Do not need to be an expert to give helpful recommendations!
Characteristics of Ethnic Hair
Hair Shaft Anatomy

**CUTICLE**
- Keratin arranged in a shingle-like pattern
- Outer layer contains hydrophobic lipids as a barrier

**CORTEX**
- Keratin filaments in cysteine-rich matrix
- Disulfide bonds impart tensile strength to the hair

International Journal of Dermatology. 2013. 53 (3)
Chemical Society Reviews. 2007. 36. 1282-1291
Comparisons: African Hair v. Caucasian/Asian Hair

African Hair
- Thinner cuticle
- Elliptical cross-section of hair shaft
- Hair shaft diameter varies along the length of the hair
- Hair shaft is curly to supercoiled
- Sebum cannot easily travel down the hair shaft

All Hair
- Same number of disulfide bonds AND same growth rate

Innate Fragility

- More prone to tangling, complex knot formation, longitudinal splits
Curls and Curl Patterns

Note: Hair Care practices may vary depending on the curl pattern

Asian Hair 1-2

Caucasian Hair 1-3a

African Hair 3-4
Ethnic Hair Care Practices
Hair Style Considerations

- Improve manageability, save time
- Protect their natural hair
- Hair trends
- Accommodate physical activity
103 21-60 year old African American women completed a 40 question survey

40% avoided exercise at times because of their hair
Common Hair Styles

- Twists
- Braids
- Straightened
  - Chemical processing
  - Thermal processing
- Dreadlocks
- Hair Extensions and Weaves
- Wigs
- “Natural Hair”
Twists and Braids

- Twists (2 strands)- single strand twists, flat twists
- Braids (3 strands)- singles, cornrows
Chemical Processing

- Also known as: “Perm” or “Relaxer”
- Permanent method of straightening the hair shaft
- Hair will not revert to natural state with moisture
- Improves hair manageability
- Often used in combination with thermal processing

Relaxer kits ~$5-10
Relaxer at Salon ~$50-80
Chemical Processing

- Relaxers contain alkaline chemicals
- High pH causes the hair shaft to swell and cuticular scales to open
- Alkaline agent (OH-) comes into contact with keratin in hair cortex, changing its amino acid composition via a process called lanthionization
- About 1/3 of cystine content of the hair shaft is converted to lanthionine, the monosulfide ether analogue of cystine
- This irreversible disruption of disulfide bonds makes hair shaft straighter (weaker)
- Lye Relaxers
  - Sodium hydroxide, scalp irritation more likely
- No-Lye Relaxers
  - Guanidine/lithium/potassium hydroxide, safe for home use, more likely to leave behind mineral deposits that make hair dry and brittle (chelating shampoos can help)

Crawford et al, Cutis. 2014. 93. 289-293
Chemical Processing

- Part the hair and apply petroleum jelly to scalp, hairline, ears
- Apply the relaxer to the proximal hair shaft in small sections
- Manually straighten the proximal hair shaft with a fine toothed comb
- Leave relaxer in for 10-20 minutes
- Rinse out with water
- Use neutralizing shampoo (pH 4-6) to stop chemical reaction and restore natural pH of hair
- Condition and style as desired
- Repeat every 8-10 weeks

Thermal Straightening

- Also known as: “Pressing”
- Heat disrupts the hydrogen bonds of keratin
- Temporary: Hair will revert back to its original state with moisture
- Very common practice for people with “natural” hair or chemically processed hair
- Makes the hair shaft appear straighter, smoother, longer
- Modern tools have temperature control
Thermal Straightening

- After washing, hair is dried with a blow dryer while brushing or while seated under a hooded dryer
- A light, non-water based moisturizer or serum is applied to the hair as well as heat protectant spray
- Metal device is heated to 300-500°F and passed through the hair section by section
Dreadlocks

- Also known as: “locks”, “dreads”
- Uncombed hair is twisted and allowed to tangle and mat into permanent clusters called “locks”
- Natural oils/locking pomades/waxes are applied to small sections of hair and a locking technique is employed
- Locks can be free flowing or styled

J Am Acad Dermatol. 2016 Sep;75(3):606-11
Dreadlocks

- Locking techniques
  - Palm rolling (natural hair): the section of hair is rolled back and forth 360 degrees. Repeat every one to several weeks, after washing. Takes time for the lock to mature.
  - Interlocking (fast method): the distal portion of a given section is braided or twisted while the proximal portion is divided in two. The distal end is looped through this opening using a crochet hook or “latch pin”. This process is repeated in alternating directions. Repeat every 3-6 months.
  - Backcombing (straight hair): hair is teased with a comb while rotating the section back and forth 180 degrees.

Weaves and Extensions

- Adds volume and length to one’s own hair
- Clip/pin, crochet, cornrow, braid or twist it in
- Synthetic hair
  - Made from acrylonitrile + vinyl chloride = modacrylic
  - Fibers are heated and strung together in various textures, lengths
  - Melt at high temperatures
- Human hair
  - Most commonly obtained from Asian women who sell hair for commercial use
  - Hair is chemically waved for texture and colored for variety
  - Can manipulate with traditional styling tools

Wigs

- Underlying hair is held against the scalp with a wig cap made of cotton, satin, nylon.
- Wig is attached using combs, clips, tapes, bonding glue.

“Natural Hair”

- Hair that is not chemically processed
- Can wear in natural conformation, also known as “wash and go”
- While hair is still damp, can style with braids, twists or braid-out, twist-out, bantu knots
- Can form looser, more defined curls with curlers (perm rods, flexi rods)
<table>
<thead>
<tr>
<th>Style</th>
<th>Tips to Decrease Damage</th>
<th>Frequency of Styling</th>
<th>Time to Style per Session</th>
<th>Relative Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Hair</td>
<td>Moisturize, silk/satin scarf QHS, protective styles that minimize tension, air dry</td>
<td>1-2 Weeks</td>
<td>~1-3 Hours</td>
<td>$</td>
</tr>
<tr>
<td>Twists/Flat Twists</td>
<td>Moisturize, do not install braids tightly</td>
<td>1-2 Weeks</td>
<td>~1-2 Hours</td>
<td>$</td>
</tr>
<tr>
<td>Braids/Cornrows</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wigs</td>
<td>Avoid glue or tape on frontal hairline</td>
<td>Daily</td>
<td>Minutes</td>
<td>$$-$$$</td>
</tr>
<tr>
<td>Weaves</td>
<td>Avoid glue on hair, use weaving net, dry completely, change &lt;2-3 months</td>
<td>2-10 Weeks</td>
<td>Several Hours</td>
<td>$$-$$$</td>
</tr>
<tr>
<td>Chemical Straightening</td>
<td>Stretch relaxers to 10-12 weeks, avoid applying to non-new growth</td>
<td>8-12 Weeks</td>
<td>~1-2 Hours</td>
<td>$$-$-$-$-$</td>
</tr>
<tr>
<td>Thermal Straightening</td>
<td>Flat iron weekly with one pass per section, lower settings</td>
<td>Weekly</td>
<td>~1-2 Hours</td>
<td>$</td>
</tr>
<tr>
<td>Dreadlocks</td>
<td>Avoid tension when long, cleanse regularly</td>
<td>1-4 Weeks</td>
<td>~2-3 Hours</td>
<td>$$-$-$-$-$</td>
</tr>
<tr>
<td>Extensions</td>
<td>Avoid very long extensions, do not install tightly</td>
<td>Several Weeks</td>
<td>Several Hours</td>
<td>$$-$$$</td>
</tr>
</tbody>
</table>
Summary

• The unique characteristics of hair in people of African descent (ethnic hair) in combination with certain hair care practices make the hair more prone to certain scalp and hair disorders.

• Making helpful recommendations to patients requires a basic understanding of these hair care practices.