Etiology and Epidemiology of Traction Alopecia and Central Centrifugal Cicatricial Alopecia in Women of African Descent

Victoria Barbosa MD, MPH, MBA
American Academy of Dermatology
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Disclosures

- Assistant Professor, Rush University Dept. of Dermatology
- Owner, Millennium Park Dermatology
- No conflicts of interest
Alopecia is the Tip of the Iceberg

Alopecia

Health and Life Choices

Politics of Race, Identity, and MONEY
Hair is Huge (Business)!

- African Americans make up 13% of the U.S. population but 22% of hair care spending
- Black consumers spent $2.54 billion in 2016
- Add in hair extensions and wigs, independent beauty suppliers, etc... $500 BILLION

Mintel’s Black Consumers and Haircare Executive Summary
Natural Hair Is Not Just a Trend

- Sales of syting products have increased 26% from 2013-2015
- Spending on relaxers has decreased 30% from 2011-2016
- 44% of AA women report wearing a wig, weave or extensions in the last 12 months
## Most Common Diagnoses by Ethnicity: 2007

<table>
<thead>
<tr>
<th>African American Patients</th>
<th>Caucasian Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnosis</td>
<td>Diagnosis</td>
</tr>
<tr>
<td>Acne</td>
<td>Acne</td>
</tr>
<tr>
<td>Dyschromia</td>
<td>Lesion of Unsp. Behavior</td>
</tr>
<tr>
<td>Contact Dermatitis &amp; Other Eczema</td>
<td>Benign Neoplasm of the Trunk</td>
</tr>
<tr>
<td><strong>Alopecia</strong></td>
<td><strong>Contact Dermatitis &amp; Other Eczema</strong></td>
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<tr>
<td>Seb Derm</td>
<td>Psoriasis</td>
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</table>

<table>
<thead>
<tr>
<th>ICD-9</th>
<th>ICD-9</th>
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<tr>
<td>706.1</td>
<td>706.1</td>
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<td>709.09</td>
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<tr>
<td>692.9</td>
<td>216.5</td>
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<tr>
<td>704.0</td>
<td>692.9</td>
</tr>
<tr>
<td>690.1</td>
<td>696.1</td>
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</tbody>
</table>

Traction Alopecia: Etiology
Traction Alopecia

- Hair loss due to prolonged or recurrent tension on the hair
- Initially a non-scarring alopecia, traction may become scarring over time
- Mostly reported in women of African descent, also seen in AA men ballerinas, Sikhs
Traction Alopecia

- Caused by hair styling choices
- Usually involves the front hairline, sometimes the crown
- May be preceded by perifollicular erythema, papules or pustules
- “Fringe sign” is common
TA: Braids and Twists
TA: Cornrows

“Protective Style”  Not So Protective
TA: Weaves & Crochets
TA: Weaves

**Sewn In**

**Glued On**

Avoid glue; encourage loose cornrows; some hairdressers will use caps or braid in additional hair to reduce tension on the patient's own hair.
TA: Ponytails
TA: Locs
TA: Rollers

Women have slept in rollers for years— if not decades

Pin curls and hair wraps are great alternatives
TA: r/o Frontal Fibrosing Alopecia

- African American women can have FFA! 66 published cases since 2010

- Look for perifollicular hyperpigmentation, facial hyperpigmentation

Traction Alopecia: Epidemiology
Dr Khumalo et al studied 874 adults in Capetown, including a survey and physical exam: BJD 2007

- TA found in 31.7% of women and 2.2% of men
- TA found in 48% of women with relaxed hair and braided extensions

Dr Traore et al performed a 2 year retrospective chart review in Burkina Faso: IJD 2007

<table>
<thead>
<tr>
<th>Type of Alopecia</th>
<th>N=</th>
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</thead>
<tbody>
<tr>
<td>Tinea</td>
<td>21</td>
</tr>
<tr>
<td>Alopecia areata</td>
<td>14</td>
</tr>
<tr>
<td>Keloid folliculitis</td>
<td>6</td>
</tr>
<tr>
<td>Androgenetic alopecia</td>
<td>4</td>
</tr>
<tr>
<td>Traction alopecia</td>
<td>4</td>
</tr>
<tr>
<td>Cosmetic alopecia</td>
<td>2</td>
</tr>
</tbody>
</table>

Dr Khumalo et al studied 1042 school children in Capetown, including a survey and physical exam: BJD 2007

- TA found in 8.6% of girls in their first year of school vs. 21.7% of girls in their last year of high school
- TA was found in 22.9% of girls with no relaxer and 32.1% of girls with a relaxer
- This trend was not statistically significant

TA: African American Girls

- Dr. Rucker Wright et al. surveyed 201 caregivers of AA girls to evaluate hair care practices and association with disease: JAAD 2011
  - N=98 from derm clinic, n=103 from non-derm clinic
  - Mean age 9.6 +/- 4.4
  - Ponytails worn by 81%, braids worn by 67% and cornrows worn by 49% in the last 12 months
  - Cornrows were statistically significantly related to TA, OR 5.79

Take Home Lessons on Traction

- Traction alopecia is 100% preventable
- Every interaction with an African American patient is an opportunity for 30 seconds of life changing education
- Develop language that is comfortable for you and not insulting to your patient
- Encourage patients to rotate hair styles
- Have a list of “go to” cosmetologists
CCC A: Etiology
CCCA: Prior Lives

- Hot comb alopecia
- Follicular degeneration syndrome
- Chemically induced scarring alopecia
- Also known as central centrifugal scarring alopecia or CCSA
Central Centrifugal Cicatricial Alopecia

- Complaint of hair loss and/or pruritis
- Often sent by hair stylist
- May have seen other dermatologists
- Usually have not used any treatment
- +/- family history
CCCA: Etiology

- Unknown
- Speculation about role of genetics, androgens, grooming, sources of inflammation
- Dlova et al, JAAD 2014
  - Studied 14 families with 31 family members; pedigree analysis suggested AD inheritance
- Suchinwanit et al: IJD 2016
  - 38 women with bx proven CCCA
  - Severity was correlated with duration
  - Androgen related conditions were prevalent
Gaithers et al conducted a retrospective survey of 101 women, 51 with CCCA, 50 without
- 21% had noticed thinning by age 30; 44% by 40
- CCCA patients were more likely to have a sister with hair loss than non-CCCA patients
- No correlation with hot combs, relaxer use, h/o burns
- CCCA patients more likely to have had cornrows/braids with added hair & weaves, and have worn them for a longer time
CCCA: Epidemiology
Kyei et al, Arch Derm 2011

- Surveyed 326 AA women
- 28% had a grade of 2 or higher on photographic scale
- Type II Diabetes, Bacterial infections and traction styles were all more common in patients with CCCA
### CCCA: Epidemiology

- **Khumalo**
  - 2.7% of women in a study of 87 South Africans
  - Not seen in South African men or children

- **Olsen et al**
  - 5.6% of 1156 AA women with significant central scalp hair loss
  - No association with relaxer use, hot comb use, hair care practices, seb derm, etc
  - No biopsies performed

- **Shah, Alexis**
  - Chart review of 67 patients, 97% female
  - Mean age of onset 38.2, mean age of presentation 42.4
  - 56% with positive family history, all with traumatic hair care practices
Black Women’s Health Study & Hair Loss: Research in Progress

- BWHS is a prospective study of 59,000 AA women since 1995
- Women complete biennial health questionnaires
- Women are currently 40-80 years, mean 58
- After the main 2015/2016 questionnaire, the 31,000 who completed the survey were invited to complete an additional survey about hair loss; 5594 have responded
BWHS & Hair Loss: Preliminary Results

- N=5594
- Mean age = 56
- 47.6% have had hair loss at the top of the scalp
- 8.8% (n=233) have had a medical doctor diagnose CCCA
- 6.7% have had a biopsy
## BWHS & Hair Loss: Raw Data: What Helps?

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antibiotics, oral</td>
<td>37</td>
<td>40</td>
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<tr>
<td>Antibiotics, topical</td>
<td>95</td>
<td>119</td>
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<tr>
<td>Minoxidil, topical</td>
<td>277</td>
<td>351</td>
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<tr>
<td>Antifungal, topical</td>
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<td>150</td>
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<tr>
<td>Antifungal, oral</td>
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<td>27</td>
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<tr>
<td>Steroid, topical</td>
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<td>143</td>
</tr>
<tr>
<td>Steroid, oral</td>
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<td>37</td>
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<tr>
<td>Steroid, injection</td>
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<td>148</td>
</tr>
<tr>
<td>OTC self care</td>
<td>501</td>
<td>523</td>
</tr>
</tbody>
</table>
Take Home Points:
Always perform a scalp exam
Take Home Points:
Every Patient Wants Their Hair Back
Acceptance of Hair Loss Can be a Long Process
Resources

- Local resources
  - Hair stylists, trusted hair transplant surgeon, support groups

- National resources
  - Cicatricial Alopecia Research Foundation
  - North American Hair Research Society
Online Patient Resource

- FB/African American Hair Loss Forum