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Styling practices, crown thinning, and scalp health in Black women

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To the Editor

Central centrifugal cicatricial alopecia (CCCA) remains an enigmatic condition, particularly concerning its relationship with hairstyling practices. Although genetics are likely important to CCCA pathogenesis,¹ the role of natural hairstyles in mitigating disease progression is still debated.² Previous studies have shown mixed results, with some indicating an association between adopting natural hairstyles and a better prognosis,³ whereas others found no significant link.^{4,5} Our study contributes to this ongoing discussion by investigating the connections between various hairstyling practices and scalp health in Black women, with a particular focus on identifying potential symptom relief when transitioning to natural hairstyles.

We conducted an Institutional Review Board (IRB)-exempt survey of 122 Black women aged 18 to 74 from May to July 2023. Questions included hairstyling practices utilized, including tight braiding, heat styling, and chemical processing, with self-reported symptoms categorized as irritation/bumps (IB), crown thinning (CT), frontal thinning (FT), chemical burns (CB), or no symptoms. The data was analyzed using percentage statistics, and the significance of associations was assessed using the chi-squared test of independence.

Among all 122 respondents, a majority were aged 35-44 (66.9%). Thirty-three reported no symptoms, 31 reported IB, 27 reported FT, 26 reported CT, and 5 reported CB. A chi-squared test found no significant association between the use of heat styling, chemical processing, or tight braiding and any symptom ($\chi^2(8, N=122)=9.65$, $p>0.05$). Fourteen respondents reported using relaxers and 18 reported using bleach/hair dye. Three chemical relaxer users reported CT, whereas two bleach/dye users reported CT. Among respondents who reported heat

styling more than once per month, 21% also reported CT. Among those who reported heat styling more than once per month, 27% reported CT. Tight braiding once or more than once per month was associated with 22% fewer reports of CT but 22% more reports of FT, though neither was statistically significant. Twenty-five respondents with CT reported going natural, 23 of which reported symptomatic improvement after going natural. However, this finding was just below significant ($\chi^2(3, N=76)=7.42$, $p=0.06$).

Although our study found no significant associations between hairstyling practices and scalp health, the data highlights the complexity of CT, often linked to CCCA in Black women and its potential connections to non-genetic factors. The lack of significant findings for heat styling, chemical processing, and tight braiding suggests these practices alone are unlikely the main drivers of CCCA. However, symptomatic improvement after transitioning to natural hairstyles supports reducing mechanical and chemical stress on the scalp, especially in those genetically predisposed to CCCA. The lack of improvement in some individuals after going natural underscores the need for early intervention to prevent scarring. Although there is no consensus on counseling regarding chemical relaxers in CCCA,² our findings suggest encouraging natural styles by, for example, increasing time between relaxers or utilizing low-tension protective styles, which may benefit Black women with symptomatic CT.

Potential conflicts of interest

The authors declare no conflicts of interest.

References

1. Malki L, Sarig O, Romano MT, Méchin MC, Peled A, Pavlovsky M, et al. Variant PADI3 in Central Centrifugal Cicatricial Alopecia. *New England Journal of Medicine*. 2019;380:833-841. PMID:30763140
2. Jackson T, Sow Y, Dinkins J, Aguh C, Omueti Ayoade K, Barbosa V, et al. Treatment for central centrifugal cicatricial alopecia—Delphi consensus recommendations. *Journal of the American Academy of Dermatology*. 2024;90:1182-1189. PMID:38341148
3. Onamusi T, Larrondo J, McMichael AJ. Clinical factors and hair care practices influencing outcomes in central centrifugal cicatricial alopecia. *Arch Dermatol Res*. 2023;315:2375-2381. PMID:37188887
4. George EA, Matthews C, Roche FC, Taylor SC. Beyond the Hot Comb: Updates in Epidemiology, Pathogenesis, and Treatment of Central Centrifugal Cicatricial Alopecia from 2011 to 2021. *Am J Clin Dermatol*. 2023;24:81-88. doi:[10.1007/s40257-022-00740-w](https://doi.org/10.1007/s40257-022-00740-w). PMID:36399228
5. Gathers RC, Mahan MG. African American Women, Hair Care, and Health Barriers. *J Clin Aesthet Dermatol*. 2014;7:26-29. PMID:25276273