DX ACROSS THE SKIN COLOR SPECTRUM

Act Fast With Traction Alopecia to Avoid Permanent Hair Loss

Kayla Felix Taylor, MD, MS[a]; Richard P. Usatine, MD[b]; Candrice R. Heath, MD[c]

Simultaneously published in *Cutis* and *Federal Practitioner.* doi:10.12788/fp.0505

Photographs courtesy of Richard P. Usatine, MD.

A Traction alopecia in a Hispanic woman who wears her hair in a tight bun.
B Traction alopecia in a Black adolescent girl who wears her hair in tight hairstyles

Traction alopecia (TA) is a common type of alopecia that ultimately can result in permanent hair loss. It often is caused or worsened by repetitive and prolonged hairstyling practices such as tight ponytails, braids, or locs, or use of wigs or weaves.[1] Use of headwear, as in certain religious or ethnic groups, also can be contributory.[2] Individuals participating in or training for occupations involving military service or ballet are at risk for TA due to hairstyling-specific policies. Early stages of TA are reversible with proper treatment and avoidance of exacerbating factors, emphasizing the importance of prompt recognition.[3]

Epidemiology

Data on the true prevalence of TA are lacking. It can occur in individuals of any race or any hair type. However, it is most common in women of African descent, affecting approximately one-third of this population.[4] Other commonly affected groups include ballerinas and active-duty service members due to tight ponytails and buns, as well as the Sikh population due to the use of turbans as a part of their religious practice.[2,5,6]

Traction alopecia also impacts children, particularly those of African descent. A 2007 study of schoolchildren in South Africa determined that more than 17% of young African girls had evidence of TA—even some as young as 6 years of age.[7]

Traction alopecia can be caused or exacerbated by the use of hair clips and bobby pins that aid holding styles in place.[8] Hair shaft morphology may contribute to the risk for TA, with more tightly coiled hair types being more susceptible.[8] Variables such as use of chemical relaxers also increase the risk for disease, especially when combined with high-tension styling methods such as braids.[9]

Key clinical features

Patients with TA clinically present with hair loss and breakage in areas with tension, most commonly the marginal areas of the scalp as well as the frontal hairline and temporal scalp. Hair loss can result in a "fringe sign," in which a patient may have preservation of a thin line of hairs at the frontal aspect of the hairline with a band of hair loss behind.[10] This presentation may be used to differentiate TA from other forms of alopecia, including frontal fibrosing alopecia and female pattern hair loss. When the hair loss is not marginal, it may mimic other forms of patchy hair loss including alopecia areata and trichotillomania. Other clinical findings in TA may include broken hairs, pustules, and follicular papules.[10] Patients also may describe symptoms such as scalp tenderness with specific hairstyles or headaches,[11] or they may be completely asymptomatic.

Trichoscopy can be helpful in guiding diagnosis and treatment. Patients with TA often have perifollicular erythema and hair casts (cylindrical structures that encircle the proximal hair shafts) in the earlier stages of the disease, with eventual loss of follicular ostia in the later stages.[10,12] Hair casts also may indicate ongoing traction.[12] The flambeau sign—white tracks seen on trichoscopy in the direction the hair is pulled—resembles a lit torch.[13]

Worth noting

Early-stage TA can be reversed by avoiding hair tension. However, patients may not be amenable to this due to personal hairstyling preferences, job duties, or religious practices. Treatment with topical or intralesional steroids or even oral antibiotics such as doxycycline for its anti-inflammatory ability may result in regrowth of lost hair if the follicles are not permanently lost and exacerbating factors are avoided.[3,14] Both topical and oral minoxidil have been used with success, with minoxidil thought to increase hair density by extending the anagen (growth) phase of hair follicles.[3,15]

Culturally sensitive patient counseling on the condition and potential exacerbating factors is critical.[16]

At later stages of the disease—after loss of follicular ostia has occurred—surgical interventions should be considered,[17] such as hair transplantation, which can be successful but remains a technical challenge due to variability in hair shaft curvature.[18] Additionally, the cost of the procedure can limit use, and some patients may not be optimal candidates due to the extent of their hair loss. Traction alopecia may not be the only hair loss condition present. Examining the scalp is important even if the chief area of concern is the marginal scalp.

Health disparity highlight

Prevention, early identification, and treatment initiated in a timely fashion are crucial to prevent permanent hair loss. There are added societal and cultural pressures that impact hairstyle and hair care practices, especially for those with tightly coiled hair.[19] Historically, tightly coiled hair has been unfairly viewed as "unprofessional," "unkempt," and a challenge to "manage" by some. Thus, heat, chemical relaxers, and tight hairstyles holding hair in one position have been used to straighten the hair permanently or temporarily or to keep it maintained in a style that did not necessitate excessive manipulation—often contributing to further tension on the hair.

Military service branches have evaluated and changed some hair-related policies to reflect the diverse hair types of military personnel.[20] The CROWN Act (www.thecrownact.com/about)—"Creating a Respectful and Open World for Natural Hair"—is a model law passed by 26 states that prohibits race-based hair discrimination, which is the denial of employment and educational opportunities because of hair texture. Although the law has not been passed in every state, it may help individuals with tightly coiled hair to embrace natural hairstyles. However, even hairstyles with one's own natural curl pattern can contribute to tension and thus potential development of TA.

Author affiliation

[a]Department of Dermatology, Wake Forest School of Medicine-Winston-Salem, North Carolina
[b]Family and Community Medicine and Dermatology, and Cutaneous Surgery, University of Texas Health, San Antonio
[c]Department of Urban Health and Population, Science, Center for Urban Bioethics, Lewis Katz School of Medicine at Temple University, Philadelphia, Pennsylvania

References

1. Larrondo J, McMichael AJ. Traction alopecia. *JAMA Dermatol*. 2023;159:676. doi:10.1001/jamadermatol.2022.6298
2. James J, Saladi RN, Fox JL. Traction alopecia in Sikh male patients. *J Am Board Fam Med*. 2007;20:497-498. doi:10.3122/jabfm.2007.05.070076
3. Callender VD, McMichael AJ, Cohen GF. Medical and surgical therapies for alopecias in black women. *Dermatol Ther*. 2004;17:164-176.
4. Loussouarn G, El Rawadi C, Genain G. Diversity of hair growth profiles. *Int J Dermatol*. 2005;44(suppl 1):6-9.
5. Samrao A, Chen C, Zedek D, et al. Traction alopecia in a ballerina: clinicopathologic features. *Arch Dermatol*. 2010;146:918-935. doi:10.1001/archdermatol.2010.183
6. Korona-Bailey J, Banaag A, Nguyen DR, et al. Free the bun: prevalence of alopecia among active duty service women, fiscal years 2010-2019. *Mil Med*. 2023;188:e492-e496. doi:10.1093/milmed/usab274
7. Khumalo NP, Jessop S, Gumedze F, et al. Hairdressing is associated with scalp disease in African schoolchildren. *Br J Dermatol*. 2007;157:106-110. doi:10.1111/j.1365-2133.2007.07987.x
8. Billero V, Miteva M. Traction alopecia: the root of the problem. *Clin Cosmet Investig Dermatol*. 2018;11:149-159. doi:10.2147/CCID.S137296
9. Haskin A, Aguh C. All hairstyles are not created equal: what the dermatologist needs to know about black hairstyling practices and the risk of traction alopecia (TA). *J Am Acad Dermatol*. 2016;75:606-611. doi:10.1016/j.jaad.2016.02.1162
10. Samrao A, Price VH, Zedek D, et al. The "fringe sign"—a useful clinical finding in traction alopecia of the marginal hair line. *Dermatol Online J*. 2011;17:1.
11. Kararizou E, Bougea AM, Giotopoulou D, et al. An update on the less-known group of other primary headaches—a review. *Eur Neurol Rev*. 2014;9:71-77. doi:10.17925/ENR.2014.09.01.71
12. Tosti A, Miteva M, Torres F, et al. Hair casts are a dermoscopic clue for the diagnosis of traction alopecia. *Br J Dermatol*. 2010;163:1353-1355.
13. Agrawal S, Daruwalla SB, Dhurat RS. The flambeau sign—a new dermoscopy finding in a case of marginal traction alopecia. *Australas J Dermatol*. 2020;61:49-50. doi:10.1111/ajd.13187
14. Lawson CN, Hollinger J, Sethi S, et al. Updates in the understanding and treatments of skin & hair disorders in women of color. *Int J Womens Dermatol*. 2017;3:S21-S37.
15. Awad A, Chim I, Sharma P, et al. Low-dose oral minoxidil improves hair density in traction alopecia. *J Am Acad Dermatol*. 2023;89:157-159. doi:10.1016/j.jaad.2023.02.024
16. Grayson C, Heath CR. Counseling about traction alopecia: a "compliment, discuss, and suggest" method. *Cutis*. 2021;108:20-22.
17. Ozçelik D. Extensive traction alopecia attributable to ponytail hairstyle and its treatment with hair transplantation. *Aesthetic Plast Surg*. 2005;29:325-327. doi:10.1007/s00266-005-0004-5
18. Singh MK, Avram MR. Technical considerations for follicular unit extraction in African-American hair. *Dermatol Surg*. 2013;39:1282-1284. doi:10.1111/dsu.12229
19. Jones NL, Heath CR. Hair at the intersection of dermatology and anthropology: a conversation on race and relationships. *Pediatr Dermatol*. 2021;38(suppl 2):158-160.
20. Franklin JMM, Wohltmann WE, Wong EB. From buns to braids and ponytails: entering a new era of female military hair-grooming standards. *Cutis*. 2021;108:31-35. doi:10.12788/cutis.0296