

# Management of Traction Alopecia: Our Experience and a Brief Review of Current Literature Recommendations

Lisa Akintilo MD MPH, Lu Yin BA, Katerina Svigos BA, Efe Kakpovbia BA,  
Jerry Shapiro MD, Kristen Lo Sicco MD

The Ronald O. Perelman Department of Dermatology, New York University Grossman School of Medicine, New York, NY

**T**raction alopecia (TA) is a common hair loss condition secondary to prolonged traction, hair shaft trauma, and sustained pulling leading to follicle loosening and perifollicular inflammation. Although often categorized as non-scarring, increasing evidence indicate that late-stage TA can cause permanent hair loss and scarring from chronic folliculitis and sustained hair tension.<sup>1</sup> TA is often seen in women of African descent, although cases have been reported in African men, Hispanic women, Japanese women, Sikh men, and ballet dancers.<sup>2,3</sup> Early effective treatment is needed to prevent progression and potential scarring; therefore, a review and summary of published literature for best practices is necessary and valuable. (Table 1)

Leading recommendations for TA are preventive behaviors, as TA is often reversible after hairstyle modifications. Discontinuing or minimizing practices contributing to traction or scalp damage such as chemical relaxers, tight locs/braids/cornrows with or without extensions, ponytails, or tight turbans can be effective at any stage, though marked benefits are noted during early TA.<sup>3</sup> Tact and respectful clinician-patient dialogue is required when encouraging patients to change hair care practices, as hair often holds important cultural significance. Simply telling patients to stop high tension hairstyles without understanding why such styles may be important and delving into alternatives may not align with cultural competency principles.

**TABLE 1.**

**Overview of Traction Alopecia Therapies at Authors' Institution**

Treatment	Treatment Details	Frequency	Duration
Styling Modifications			
Modifications to hairstyling practices	Discontinue or minimize practices resulting in tension or traction on the frontal and/or occipital hairline. These may include chemical relaxers, cornrows, tight locs/braids with or without extensions, ponytails, tight turbans, or combination hairstyles.		Indefinite
Topical treatments			
Topical steroids	Topical fluocinolone oil 0.01% (tight curl pattern) or fluocinonide 0.05% solution (loose curl pattern)	Once or twice a day under occlusion	Until clinical improvement
Topical minoxidil	Topical minoxidil 5% solution or foam	Once or twice daily	Indefinite
Topical antibiotics	Topical clindamycin 1%	Once a day	Until clinical improvement
Intralesional treatments			
Intralesional corticosteroids	Intralesional triamcinolone 2.5 or 5.0 mg/cc for 3 cc total to the frontotemporal hairline and occipital hairline if affected	Once a month	Until clinical improvement, re-evaluate every month
Systemic treatments			
Oral antibiotics	Tetracyclines such as doxycycline or minocycline. Initial dose 100 mg BID, titrate down to 20mg BID submicrobial dosing as tolerated.	Twice a day	Reevaluate every visit for clinical improvement. Reassess and consider discontinuation or decreasing to submicrobial dosing at 3 to 4 months. <sup>5</sup>
Surgical treatments			
Hair transplantation*	Different techniques are available including micro or mini grafting, punch grafting, and follicular unit transplantation. Black patients tend to have better results with the former two techniques compared to the latter. <sup>4</sup> Follicular unit extraction should also be used with caution in patients with curly hair due to risks of hair follicle transection.	May require multiple procedures	

\*Use with caution in patients with concomitant scarring alopecia, as procedure may increase koebnerization risk.

Topical and intralesional corticosteroids, typically triamcinolone acetonide (ILTAC), are the most common TA treatment, although evidence is mixed. At our institution, topical fluocinonide 0.01% oil and fluocinonide 0.05% solution are prescribed once to twice daily. Oil is preferred for curlier hair, as desiccating solutions can lead to fragility and breakage. Intralesional corticosteroids dosages used for TA have not been well documented in the literature. Higher concentrations have a risk of dyschromia and hypopigmentation. Typically, a maximum dose of 20mg per month is preferred to limit local and potentially systemic side effects.<sup>4</sup> Concentration, ranging from 2.5 to 5 mg/cc, and volume vary depending on the surface area involved.

Few publications describe the use of topical or oral antibiotics in TA management. The mechanism of action is thought to be similar to that of intralesional corticosteroids by decreasing hair follicle inflammation. At our institution topical 1% clindamycin or oral tetracyclines such as doxycycline or minocycline are often used starting at 100mg BID, and antibiotic therapy is reassessed after 3–4 months to avoid antimicrobial resistance.<sup>5</sup> Doxycycline is preferred due to its better side effect profile.

To date, there is only one publication describing the use of topical minoxidil for TA. Khumalo et al presented two cases of South African women with clinically diagnosed TA who had significant regrowth with 2% topical minoxidil lotion.<sup>6</sup> At our institution, we utilize 5% topical minoxidil solution applied to affected areas twice daily.

Surgery can be effective for late-stage TA. Punch grafting and micro- or mini-grafting can be performed successfully.<sup>7</sup> Despite the risk of keloids or koebnerization in the setting of concomitant scarring alopecia, surgery should certainly be considered in patients with quiescent cicatricial alopecia and minimal response to medical therapies.

Novel therapies have been recently investigated in the medical literature. Goren et al proposed that topical alpha1 agonists may be a convenient preventative approach to stimulate piloerection and resist pulling forces in high tension hair styling practices.<sup>8</sup>

In summary, there are limited effective treatment options for TA. Future directions in TA management include heightened public awareness to mitigate risks of high-tension hairstyles in partnership with community hair care professionals. More research is required to investigate new potential TA treatments including oral minoxidil, platelet-rich plasma, and laser assisted drug delivery with growth factors. Further studies are needed to determine the effectiveness of these treatment options.

## DISCLOSURES

The authors have no conflict of interest.

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## AUTHOR CORRESPONDENCE

**Kristen Lo Sicco MD**

E-mail:.....Kristen.Losicco@nyulangone.org