Received: 2 March 2022 | Revised: 28 July 2022 | Accepted: 11 September 2022

DOI: 10.1111/dth.15824

DERMATOLOGIC THERAPY WILEY

LETTER

Microneedling as an adjunctive treatment for trichotillomania

Dear Editor,

Trichotillomania is a psychocutaneous disorder characterized by the compulsive pulling of one's hair from the scalp, eyebrows, or other regions of the body. The lifetime prevalence of trichotillomania is estimated to be 2% with a mean age of onset in late adolescence.[1] Trichotillomania is currently classified in the Obsessive Compulsive and Related Disorders category of the Diagnostics and Statistical Manual of Mental Disorders, Fifth Edition.[2]

Microneedling is a dermatological procedure involving the intentional creation of percutaneous wounds with medical-grade needles to stimulate the release of factors involved in wound-healing and angiogenesis.[3] Typically, this is achieved using a dermaroller, a handheld tool covered by small, fixed needles. In patients with trichotillomania, microneedling may be particularly effective as it not only stimulates hair growth but also reproduces the sensation of hair pulling. In mimicking such a sensation, patients with trichotillomania may relieve urges without performing the undesired behavior and prevent further impulsive acts of hair pulling. Here, we report three cases of trichotillomania treated with microneedling using a dermaroller.

Informed consent was obtained for all patients. In the first case, a 33-year-old female with trichotillomania since adolescence presented with parietal and temporal patches of hair loss (Figure 1A,B). In the second case, a 30-year-old female with trichotillomania since age 13 years presented with hair loss localized to the scalp vertex (Figure 1C,D). Symptoms had worsened over the past 2 years despite treatment with daily antidepressant and behavioral therapy. Finally, a 15-year-old female with trichotillomania presented with 4 months of hair pulling from the left frontal and parietal regions of the scalp (Figure 1E,F). In all patients, pull-test was negative and trichoscopic examination revealed decreased hair density, marked morphologic variability, and many short hairs of differing lengths. Trichoptilosis, flame hairs, and occasional yellow dots were also present.

A dermaroller with 0.5 mm needles was provided to each patient, which they were instructed to use on their scalp whenever they experienced an urge to hair-pull. Daily topical 5% minoxidil foam was also prescribed to stimulate local hair regrowth. On evaluation at six or 12 months, all patients reported good adherence to dermaroller use and demonstrated significant clinical improvement of affected scalp regions, which was confirmed with trichoscopy (Figure 1G–L).

Trichotillomania can have a significant negative impact on quality of life in affected patients. Symptoms can be challenging to manage despite treatment, and often require a multi-modal therapeutic approach. The present case series highlights the feasibility, safety, and potential efficacy of microneedling using a dermaroller for both the behavioral and dermatological treatment of trichotillomania.

The action of microneedling for trichotillomania is twofold: (1) Cutaneous micro-injuries stimulate hair regrowth on the scalp; (2) The sensation of needles in the scalp mimics the sensation of hair-

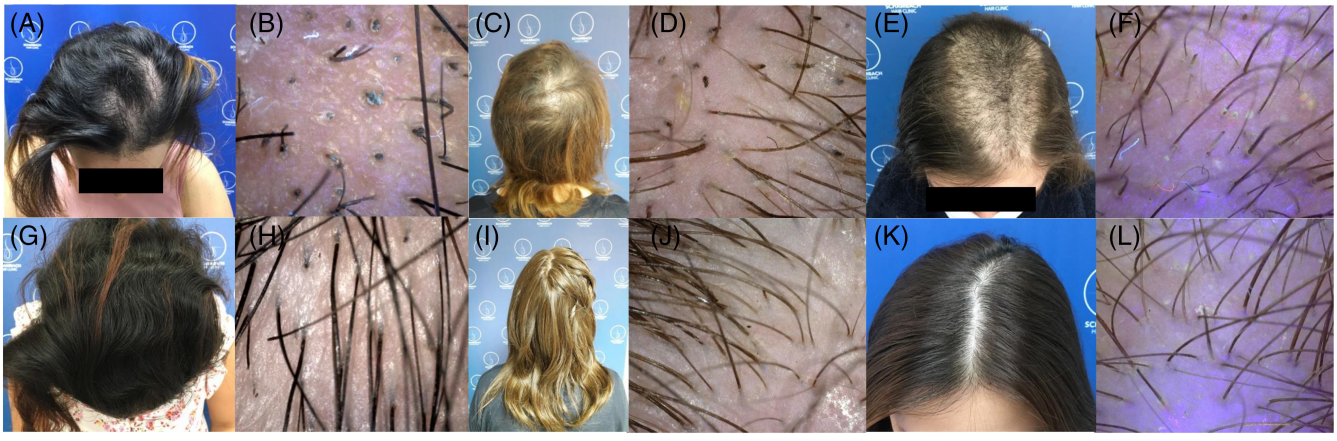

FIGURE 1 Clinical and trichoscopic findings before and after treatment with microneedling. (A, B) Case 1 patient before treatment; (C, D) Case 2 patient before treatment; (E, F) Case 3 patient before treatment; (G, H) Case 1 patient after treatment; (I, J) Case 2 patient after treatment; (K, L) Case 3 patient after treatment

pulling, thereby satisfying the patient's behavioral urge. Microneedling in this context acts as a competing response to the hair pulling impulse. Such competing responses are a major component of habit reversal training, a therapeutic approach commonly used in patients with trichotillomania.[4] The use of microneedling for trichotillomania is also similar to some harm minimization strategies employed for patients performing self-harm. These strategies may involve the use of sensation proxies, or behaviors that provide a safer, less damaging version of a desired physical sensation.[5] In patients who self-harm, this may include snapping an elastic band against the skin or squeezing an ice cube. Microneedling similarly may act as a sensation proxy in patients with urges to hair pull.

In conclusion, microneedling is a novel treatment option for patients with trichotillomania. While the present case series offers promising initial data, further controlled trials with monotherapy of miconeedling using dermarollers are warranted.

DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

Rachel E. Christensen[1]
Marie Schambach[2]
Mohammad Jafferany[3]

[1]*Rutgers Robert Wood Johnson Medical School, New Brunswick, New Jersey, USA*

[2]*Schambach Hair Clinic, Guatemala City, Guatemala*

[3]*Department of Psychiatry and Behavioral Sciences, Central Michigan University College of Medicine/CMU Medical Education Partners, Saginaw, Michigan, USA*

Correspondence
Rachel E. Christensen, Rutgers Robert Wood Johnson Medical School, 125 Paterson Street, New Brunswick, NJ 08901, USA.
Email: rec154@rwjms.rutgers.edu

ORCID

Rachel E. Christensen https://orcid.org/0000-0002-8637-5211
Mohammad Jafferany https://orcid.org/0000-0001-6358-9068

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