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Behavioral Treatment of Trichotillomania and Trichophagia in a 29-Month-Old Girl

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Early childhood trichotillomania (TTM) has often been considered to be benign. However, untreated early childhood TTM can have significant negative physical and psychological consequences. This report describes the behavioral treatment of a 29-month-old girl with TTM. Treatment consisted of 14 daily sessions of behavioral intervention, followed by 3 consecutive days of follow-up treatment conducted 7 weeks after the end of initial treatment. The hair pulling was addressed by using reinforcers for not pulling, provided at intervals of increasing length. At the end of initial treatment, the hair pulling improved significantly. At follow-up, although some of the initial treatment gains were reduced, the patient maintained significant improvement compared with baseline.

Keywords: trichotillomania; trichophagia; hair pulling; behavioral intervention

Trichotillomania (TTM) during early childhood is rare and has been generally considered to be benign. Early TTM case series suggested that the disorder may remit spontaneously, or with minimal clinical intervention (e.g., encouragement). In some cases, however, early childhood TTM is associated with a chronic course and significant pathology if left untreated. Moreover, trichophagia, or the ingesting of pulled hair, may result in a large clump of hair in the gastrointestinal tract (ie, trichobezoar) that can lead to bleeding, perforation, and obstruction if not removed. Psychologically, TTM can contribute to social anxiety, depressive symptoms, low self-esteem, and negative parent–child relations as parents can feel frustrated with their child's actions and powerless in remedying them. Therefore, early childhood TTM should not be characterized as a benign disorder; rather, some cases—particularly those with trichophagia—should be attended to clinically. With this in mind, we describe the behavioral treatment of early childhood TTM and trichophagia in a 29-month-old girl, which, to our knowledge, is the first case report discussing treatment in a child this young.

Jennifer’s (pseudonym) parents reported that Jennifer had a fascination with hair as an infant and would often touch her mother's or her own hair while feeding. At the age of 8 months, she began to pull out her own hair, pulling at large clumps as often as “100 times” a day. Jennifer, who is left-handed, pulled out her hair by reaching across the front of her head with her left hand and pulling from the right side. She would wind a clump of hair around her fingers and rip out the hair with force and without apparent pain. Once the hair was pulled, she promptly ingested it, licking her fingers to get any strands left behind. Jennifer also picked up hair from the bathroom floor at home and ingested it. Hair pulling antecedents varied, including feelings of frustration, boredom, or being restrained (eg, in her car seat). Jennifer's parents believed that she was aware that they disapproved of her hair pulling, as she often hid from them to pull and eat her hair.
Prior to the current treatment, Jennifer's parents sought treatment from multiple physicians with limited success. Often, they were told that she would “grow out of it.” One provider suggested they cut her hair off, which they did. However, Jennifer responded to this by pulling out hair from the heads of others, such as her mother, grandmother, or other children at daycare. Moreover, Jennifer promptly began to pull her own hair out again once it was long enough. Her parents had tried other strategies in the past, including occupying her hands with other activities or objects, behavioral contingencies (eg, timeout), providing dolls with and without hair to play with, providing textured/silky blankets, and ignoring the hair pulling completely.

Other than TTM and trichophagia, Jennifer had no behavioral issues. She was born full term and had met all developmental milestones. She was polite, well-behaved, happy, nonaggressive, and verbal. She had advanced quickly in school and was enrolled in a structured program designed to prepare 2- to 3-year-old children for kindergarten.

Treatment consisted of 14 daily sessions of behavioral intervention, during which Jennifer and her mother stayed in a rented apartment as the family lived approximately 12 hours drive from our facility. In the first session, we worked on identifying the pattern of hair pulling, such as setting events and antecedents. The most problematic situations were when Jennifer was alone and in a situation when she could not be easily stopped, such as in her car seat. We also identified possible rewards that included praise, stickers, and a particular brand of snacks based on a cartoon. These rewards were used exclusively for the hair pulling intervention (ie, Jennifer would not get these particular rewards any other way).

In the second session, we worked with Jennifer’s mother to reward Jennifer for not pulling hair for intervals of 2 to 3 minutes. Because of Jennifer’s young age, external indicators were used to signify the length of intervals. Statements such as “When mommy comes back in the room and you haven’t pulled your hair, you get a sticker,” were used. After success during an interval, Jennifer was presented with praise and the tangible reward and asked why she was getting it. After a few days of this procedure, Jennifer started to respond by saying “Don’t pull my hair.” We also began to ask her, before the start of each interval, “What do you get a sticker (or snack) for?” and she started responding with “Don’t pull my hair.” During sessions, intervals were increased from 2 minutes to 60 minutes (ie, the session duration) by the end of treatment. The behavioral intervention was introduced to the home setting after the second session. Because of the very high frequency of the behavior, Jennifer’s mother was asked to pick a 2-hour period of the day and apply the reward-based behavioral intervention used in session. At the start of treatment, Jennifer’s mother was asked to keep a log of hair pulling frequency for the duration of treatment. However, she reported after the first day of treatment that she could not keep up with the log since Jennifer was pulling over a 100 times each day. Therefore, we discontinued the log.

Jennifer responded well after 3 days of intervention. As the hair pulling reduced in frequency, we increased the length of reinforcement intervals at home and in the clinic setting. At treatment completion, the intervention was applied at regular intervals of 1 to 3 hours (depending on the frequency of pulling) throughout the day.

We addressed Jennifer’s trichophagia by asking her mother to clean hair around the house and throw it away while using words like “yucky.” When Jennifer put hair in her mouth, her mother immediately removed it and made Jennifer throw it away. When she threw it away on her own, she was rewarded with stickers or snacks.

To target Jennifer’s hair pulling when she was alone, some of the sessions were conducted with Jennifer playing in a room by herself, with her mother and the therapist observing behind a one-way mirror. At the end of each interval, her mother intermittently entered the room, and if Jennifer had not pulled, gave her a reward. If she had, she would be told why she was not getting a reward, but that she could earn a reward the next time her mom entered the room. Another situation in which hair pulling was particularly frequent was in the car seat. We addressed this by conducting sessions with Jennifer in her car seat and her mother driving around town. The therapist began by sitting next to her and rewarding her for not pulling hair. Subsequently, her mother took over the intervention and stopped the car at regular intervals. If Jennifer had not pulled, she would be rewarded. As in other settings, the length of the intervals was increased gradually.

Jennifer’s hair pulling improved significantly during the course of treatment. According to her mother’s report, her hair pulling reduced from “almost all day every day” to 15 to 30 minutes per day, and from more than 100 hairs per day to 1 to 10 hairs per day.
Her mother reported that she was pulling once or twice a day, a significant decrease from more than a 100 times a day. Additionally, when she did pull, her mother was able to stop her almost immediately. In the past, Jennifer would forcibly try to prevent her mother from stopping her. Moreover, when asked if she pulled hair, Jennifer would admit to it if she had, which was also not the case in the past.

Treatment posed several challenges. During the course of treatment, Jennifer had separate days when her hair pulling regressed to baseline level. Once was during the weekend after the first week of treatment, and the second was during a break when she returned home for several days. Both instances were successfully dealt with by shortening the reinforcement interval to a few minutes and increasing it quickly back to a few hours. Another challenge was ensuring that Jennifer did not view any rewards as being given for engaging in hair pulling. To help with this, rewards were given only after the ends of intervals that did not include hair pulling, and after sufficient time had passed from the last hair pulling episode.

Jennifer and her mother presented for follow-up treatment 7 weeks after the end of intensive treatment. Generally, she had maintained significant treatment gains. Her mother reported that after returning home from intensive treatment, Jennifer pulled very little for about 2 weeks. Subsequently, she progressed to pulling several times a day, but the parents were able to intervene most of the time through application of the above behavioral principles. However, the rewards, especially the stickers, eventually stopped working and attempts at identifying new reinforcers were unsuccessful. In spite of this, Jennifer never returned to the baseline level of hair pulling—at the time of the follow-up visit, Jennifer was pulling about 10 to 20 times per day (estimated at baseline was about 100) in clumps that were much smaller than before. Qualitatively, although short in length, she had hair on all parts of her scalp, which was another significant improvement from baseline. As well, Jennifer was engaging in minimal hair ingestion. Taken together, behavioral treatment of TTM in this 2-year-old was successful following acute treatment with modest maintenance of treatment gains. In light of limited efficacy of pharmacological agents and strong efficacy of behavioral approaches in adults with TTM, the promise of behavioral treatment (eg, habit reversal training) in childhood TTM warrants testing. Currently, there is a National Institute of Mental Health trial examining behavioral treatment for pediatric TTM, involving children ages 8 to 17 (principal investigator: Martin Franklin; 5R01MH077197); as this study does not include younger children, further investigation into the efficacy of behavioral intervention for this subgroup is needed.

References


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