Presence of Trichodynia Symptoms in Hair Diseases and Related Factors

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Keywords

Androgenetic alopecia · Cicatricial alopecia · Trichodynia

Abstract

Background: Trichodynia can be described as a feeling of discomfort in the scalp. Studies on trichodynia also have different data. **Aim:** The aim of this study was to investigate the frequency and associated factors of trichodynia. **Methods:** A questionnaire was applied to 249 patients who were admitted to the Hair Diseases Unit of Istanbul University, Cerrahpaşa Hospital. We recorded the age, sex, hair loss duration, diagnosis, and whether or not patients had trichodynia symptoms. **Results:** Out of a total of 249 patients, 89 patients (35.7%) had trichodynia. We found that the mean age of patients with trichodynia was higher than the mean age of those without trichodynia. Trichodynia was more common in women than in men. In addition, it was more common in the cicatricial alopecia group than the other disease groups. **Discussion:** The frequency of trichodynia was significantly higher in women in comparison to that in men. Symptoms of trichodynia were significantly more common in patients with cicatricial alopecia in comparison to that in the other 4 diagnostic categories. There was no significant difference between the 4 diagnostic categories in terms of trichodynia severity.

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Introduction

Trichodynia is a term used to describe the sensation of discomfort on the scalp, which is reported by some patients presenting with hair loss [1]. The etiology of trichodynia is still unknown, and it may be a multietiological condition [2]. It is reported in the literature that trichodynia is more common in women than in men. In patients with trichodynia, pain is usually spontaneous, but it is stated that activities such as hair combing, hair washing, and wearing a hat can trigger the symptoms [3]. In our study, we investigated the relationship of trichodynia with age, sex, duration of hair loss, and other hair diseases.

Materials and Methods

A questionnaire was applied to 249 patients who were admitted to the Hair Diseases Unit of Istanbul University, Cerrahpaşa Hospital. The study included patients older than 12 years with no acute critical disease and no topical immunotherapy. Patients who were not able to understand or speak Turkish sufficiently to understand and give clear answers to the questions in the study form or patients with cognitive dysfunction were excluded.

The questionnaire applied to the patients is presented in Table 1. We recorded the age, sex, hair loss duration, diagnosis, and whether or not patients had trichodynia symptoms.

Table 1. Questions asked in the survey

Name-surname
Date of birth
Sex: female or male
How long has your hair been shed?
Do you feel pity, stinging, burning on your scalp?
What is the severity of the pain, stinging, burning sensation you feel on the scalp?
Mild
Middle
Severe
Diagnosis

Statistical analysis was performed using the IBM SPSS Statistics for Windows, version 21.0 (IBM Corp., Armonk, NY, USA). Normality of continuous variables was evaluated with the Kolmogorov-Smirnov test and Q-Q graph. Cross-group comparisons were performed with the χ^2 test and Fisher's exact test for categorical variables and the Mann-Whitney U test for continuous variables. Differences were considered significant at $p \leq 0.05$.

Consent was obtained from the patient before completing the questionnaire. The approval of İstanbul University-Cerrahpaşa, Cerrahpaşa Medical Faculty Ethics Committee was obtained before the study was initiated.

Results

A total of 249 patients (163 females and 86 males) with a median age of 31 (13–74) years were included in the study. The median age was 33 years (range, 13–74 years) for females and 30 years (range, 15–55 years) for males. The mean disease duration was 6.33 years (range, 0.1–37 years), 6.79 years (range, 0.1–37 years) in females and 5.41 years (range, 0.25–23 years) in males. Of the 249 patients, 55 had alopecia areata, 128 had androgenetic alopecia, 25 had telogen effluvium, 32 had cicatricial alopecia, and 9 had diseases other than these 4 groups (e.g., seborrheic dermatitis and loose anagen syndrome). Out of a total of 249 patients, 89 patients (35.7%) had trichodynia. The characteristics of the patients are presented in Table 2. The median age of the patients with trichodynia symptoms (39 years [range, 24.5–43.5 years]) was significantly higher than that of those without trichodynia symptoms (30 years [range, 24–37 years]) ($p = 0.033$). Trichodynia was found in 43.6% of women (71/163) and in 20.9% of men (18/86). The frequency of trichodynia was significantly higher in women in comparison to that

in men ($p < 0.001$). Symptoms of trichodynia were significantly more common in patients with cicatricial alopecia (56.3% [18/32]) in comparison to that in the other 4 diagnostic categories ($p = 0.040$). Symptoms of trichodynia were observed in 27.3% of patients with alopecia areata, 32% of patients with androgenetic alopecia, and 48% of patients with telogen effluvium. There was no significant difference between the 4 diagnostic categories in terms of trichodynia severity ($p = 0.436$).

Discussion

In the present study evaluating the frequency and associated factors of trichodynia, trichodynia was diagnosed in 35.7% of the 249 patients. The mean age of patients with trichodynia was found to be higher than the mean age of patients without trichodynia. The rate was higher in women than in men, and it was seen more often in the cicatricial alopecia group. Williman et al. [4] found that the mean age of patients with trichodynia was higher than the mean age of patients without trichodynia. In the same study, trichodynia was found more frequently in women than in men. Kivanç-Altunay et al. [5] reported a rate of 36.6% in female patients. There may be several possible explanations for the higher prevalence of trichodynia in female patients. Trichodynia might cause more distress to female patients and make them more likely to seek dermatological treatment [6]. A second possible explanation may be the increased pain perception in female patients [4, 7]. Rebora et al. [8] reported the frequency of trichodynia in women to be 34.2%, whereas Williman et al. [4] reported the rate as 17.0% in patients of both genders with hair loss. Recently, Kivanç-Altunay et al. [5] found the rate of trichodynia as 29%. In our study, 35.7% of the patients had trichodynia symptoms.

There are conflicting results in the literature regarding concomitant hair diseases in patients with trichodynia. Durusoy et al. [9] found that trichodynia was more common in the telogen effluvium group than in the androgenetic alopecia group. Williman et al. [4] found no association between trichodynia and the cause of hair loss. Contrary to the literature that frequently associates trichodynia with telogen effluvium and androgenetic alopecia, trichodynia was found to be more frequently associated with cicatricial alopecia in our study.

The pathogenesis of trichodynia remains uncertain. Substance p is thought to play an important role in pathogenesis. In patients with trichodynia symptoms, a relationship with inflammatory diseases such as folliculitis

Table 2. Patient data

	Female	Male	N
Patients, <i>n</i>	163	86	249
Mean age, years	34.97 (13–74)	28.75 (15–55)	32.82 (13–74)
Mean disease duration, years	6.79 (0.1–37)	5.41 (0.25–23)	6.33 (0.1–37)

decalvans and alopecia areata has been identified [10, 11]. This situation supports the view that trichodynia is a symptom of underlying inflammation [8]. This may explain the higher rate of trichodynia in our patients with cicatricial alopecia. In conclusion, our findings suggest that trichodynia symptoms are more common in cicatricial alopecia patients.

Statement of Ethics

The research was conducted ethically in accordance with the World Medical Association Declaration of Helsinki. The subjects have given their written informed consent, and the study protocol was approved by the institute's ethics committee.

Conflict of Interest Statement

The authors declare that there are no conflicts of interest.

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Author Contributions

All the authors have contributed to the conception of the work and the acquisition and analysis of the data. They have revised the content and approved the final version.

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