

Report

The presence of trichodynia in patients with telogen effluvium and androgenetic alopecia

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Abstract

Background Trichodynia refers to pain, discomfort, and/or paresthesia in the skin of the scalp or the hair. There may be an associated psychologic comorbidity. Although androgenetic alopecia (AGA) and telogen effluvium (TE) are different entities in terms of pathogenesis, etiology, and clinical picture, both may be influenced by psychologic stress and may be the cause of secondary stress.

Aims To investigate the presence of trichodynia in patients with TE and AGA and to evaluate psychologic comorbidity in patients with trichodynia.

Materials and methods A total of 248 patients (153 females, 95 males), presenting with hair loss due to either TE or AGA, were enrolled in this study. The prevalence of trichodynia in these two groups was compared with that in controls ($n = 184$). In addition, psychiatric evaluation was performed in 25 patients with trichodynia (13 females, 12 males) and in 25 controls (16 females, nine males) without alopecia and trichodynia by a psychiatrist; Diagnostic and Statistical Manual of Mental Disorders (DSM)IV criteria were used for the assessment.

Results Trichodynia was found in 72 patients (29%) with hair loss and in six controls (3.3%; $P < 0.0001$); 25 of the 72 patients with trichodynia underwent psychiatric evaluation and 19 of the 25 patients were found to have psychopathologic signs (76%). In the control group, only five patients had psychopathologic signs (20%; $P = 0.0004$). Of those with hair loss, trichodynia was more frequent in the TE group than in the AGA group ($P < 0.0071$).

Conclusions Trichodynia is a common symptom in patients with TE and AGA, and often coexists with psychopathologic findings, including depression, obsessive personality disorder, and anxiety.

Introduction

Alopecia is a common condition. Telogen effluvium (TE) and androgenetic alopecia (AGA) are the most common alopecia variants, and have a distinct etiology, pathogenesis, and clinical presentation. A common factor in both conditions is the association with stress and anxiety.¹⁻⁶ Unpleasant sensations, such as pain, burning, and stinging of the skin of the scalp, in patients with alopecia have been reported, and there is a relationship between these sensations, alopecia, and psychopathologic conditions, such as depression and anxiety. These symptoms have been considered to represent cutaneous dysesthesia syndrome, and the term “trichodynia” has been proposed for pain, paresthesia, and discomfort of the skin of the scalp.⁷⁻¹³

Patients and methods

Two hundred and forty-eight patients, aged 8–80 years (mean age, 35.4 years), presenting with hair loss, were classified into two groups,

AGA and TE, according to clinical presentation and trichologic examination. One hundred and eighty-four control subjects, without hair loss or hair disease, were identified. Their ages ranged from 19 to 71 years (mean age, 34.7 years). All patients were questioned about the presence of altered sensation, burning, stinging, or pain, indicating trichodynia. Twenty-five patients with trichodynia underwent psychiatric evaluation. Twenty-five control subjects with a mean age of 33.4 years (range, 18–49 years) were randomly enrolled. Controls had a negative personal history for hair loss and for trichodynia. Fisher's exact chi-squared and chi-squared tests were used for statistical analyses.

Results

There were 164 patients in the AGA group (72 females and 92 males). The average age was 40.5 years (range, 16–80 years). The TE group consisted of 84 patients (81 females and three males). The mean age was 30.3 years (range, 11–64 years). One hundred and eighty-four subjects were enlisted as

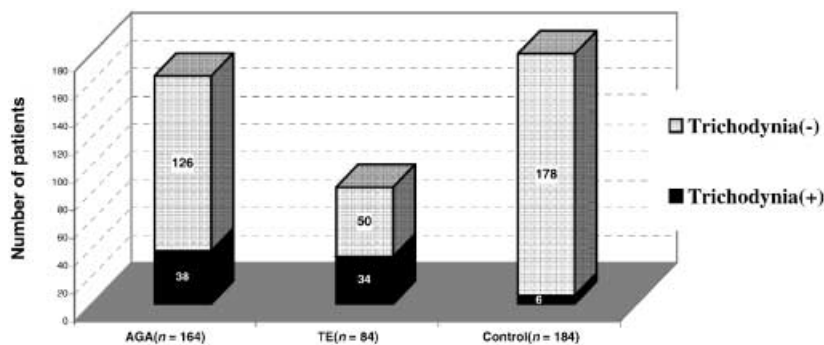


Figure 1 Prevalence of trichodynia in the alopecia and control groups. AGA, androgenetic alopecia; TE, telogen effluvium

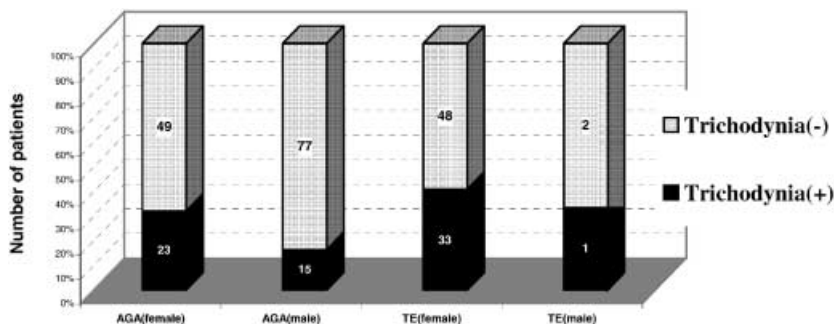


Figure 2 Distribution of trichodynia in alopecia patients according to sex. AGA, androgenetic alopecia; TE, telogen effluvium

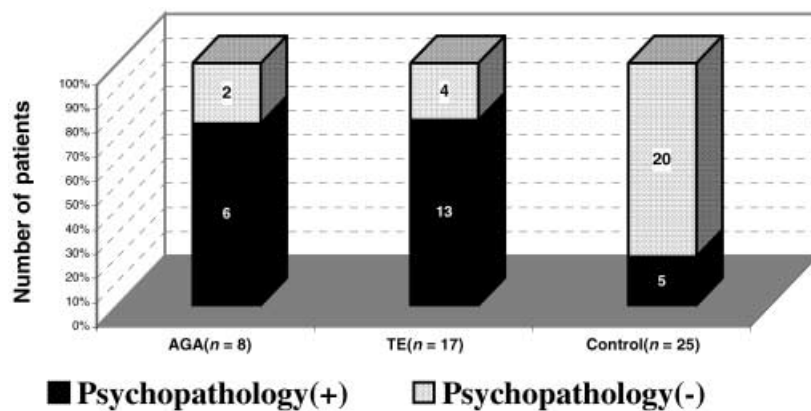


Figure 3 Presence of psychopathology in patients with trichodynia. AGA, androgenetic alopecia; TE, telogen effluvium

controls (107 females and 77 males). The mean age was 34.7 years (range, 19–71 years). Trichodynia was found in 72 patients (29%) in the alopecia group (which included 248 patients) and in six controls (3.3%; $P < 0.0001$) (Fig. 1). The trichodynia-positive group included 38 patients (23 females, 15 males) with AGA and 34 patients (33 females and one male) with TE (Fig. 2). The proportion of females to males was 72/92 (43.9%/56.1%) in the AGA group and 81/3 (96.4%/3.6%) in the TE group ($P < 0.0001$). There was no statistically significant difference between female patients with trichodynia in the AGA group and those in the TE group ($P = 0.3374$) or between male patients with trichodynia in the AGA group and those in the TE group ($P = 0.4287$).

From the trichodynia group, 25 patients (13 females and 12 males) underwent psychiatric examination. Nineteen patients (76%) were found to have psychopathologic findings. Of the 17 patients with TE, 13 (76.5%) had positive psychologic findings: depression, anxiety disorder, and dysthymic disorder. The psychiatric disorders in six of the eight patients with AGA and trichodynia were in the form of depression, anxiety disorder, and/or obsessive personality disorder according to Diagnostic and Statistical Manual of Mental Disorders (DSM)IV criteria. Of the 25 controls, only five had psychiatric findings (20%), including obsessive personality disorder, depression, and anxiety disorder (Fig. 3). There was a statistically significant difference between the trichodynia

group and the control group (95% confidence interval, 66.2–85.8%) ($P = 0.0004$). There was no meaningful difference between the trichodynia and the control groups with regard to the incidence of psychopathology ($P = 1.000$).

Discussion

Complaints such as pain, burning, stinging, and pruritus of the skin of the scalp in patients with diffuse alopecia were described by Sulzberger *et al.*¹⁴ in 1960, although these have also been mentioned in the earlier dermatology literature.⁹ Rebora *et al.*¹⁰ found trichodynia in 76 of 222 female patients complaining of hair loss (34.2%), and speculated that trichodynia and hair loss may be associated with peribulbar inflammation. Trüeb¹² suggested a connection between trichodynia and psychopathologic findings in alopecia patients, in particular in females. We investigated the presence of trichodynia in patients with AGA and TE. Trichodynia was found in 72 of 248 patients (29%) with either TE or AGA, which was significantly more prevalent than in the control group. In a similar study by Grimalt *et al.*,¹¹ trichodynia was found in 83 of 548 patients (14.3%) with TE, AGA, or alopecia areata. In the patient cohort of Grimalt *et al.*, 58% were females and trichodynia was present in 89% of these. In our patient cohort, trichodynia was found in 56 of 153 female patients (36.6%).

When we compared the AGA and TE groups with regard to the prevalence of trichodynia, we found that trichodynia was more prevalent in the TE group than in the AGA group ($P < 0.0071$). The prevalence of trichodynia in both AGA and TE groups was significantly higher than that in the control group ($P < 0.0001$).

We conclude that trichodynia is prevalent amongst patients with hair loss, especially those with AGA or TE. Psychologic problems were significantly more common in trichodynia patients than in controls. This suggests a relationship between the two, which is in agreement with the observations of Trüeb^{12,13} and Grimalt *et al.*¹¹ In contrast with Grimalt *et al.*,¹¹ who reported that trichodynia was mainly associated with anxiety, we found obsessive personality disorder to be most common in the AGA group and depression in the TE group. The finding of trichodynia in conditions with

no apparent hair loss or scalp disease does not support the observation of Rebora *et al.*,¹⁰ who postulated a connection between trichodynia and peribulbar inflammation.

It is not known whether the higher incidence of trichodynia in the alopecia group is due to a pathologic alteration of sensorial perception or to somatization of the anxiety and depression associated with hair loss, and further studies on the cause of this often distressing dysesthetic symptom are required.

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