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THERAPEUTIC HOTLINE: SHORT PAPER

Prevalence of hair shedding among women

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Abstract

Hair shedding in female patients is a frequent complaint in dermatological, endocrinological, and gynecological consults. Previously, the Sinclair Hair Shedding Scale was developed to assess normal versus excessive hair shedding in female pattern hair loss (FPHL) subjects. However, the prevalence of hair shedding in females not suffering from FPHL is unknown. To gain better understanding of hair shedding in the general population, we recruited 300 subjects visiting a public hospital for conditions other than alopecia. Of the 300 subjects recruited, 263 did not suffer from FPHL. Among those subjects, approximately 40% reported experiencing excessive hair shedding (as defined by the Sinclair Hair Shedding Scale) on hair washing days. In comparison, in our subject population, approximately 60% of subjects with FPHL reported excessive hair shedding on hair washing days. To best of our knowledge, this is the first study to quantify the prevalence of hair shedding in women. While, no treatment currently exists for this condition, we hope that this study would encourage physicians and researchers to address this frequent concern.

1 | INTRODUCTION

Due to asynchronous nature of human hair cycle, hair shedding is part of the normal physiological processes of the body. It is estimated that normal shedding in females is 50–150 hairs over a 24-hr period (Sinclair, 1999). Increased hair shedding in female patients is a frequent complaint in dermatological, endocrinological, and gynecological consults. It can be related to various conditions such as endocrinological and nutritional disorders, stress, inflammatory and infectious disorders, and it is also linked with administration of certain drugs (Malkud, 2015). It is present in different dermatological disorders including anagen and telogen effluvium, cicatricial alopecias, female pattern hair loss (FPHL), alopecia areata, and traction alopecia.

Increased hair shedding can be reported by patients due to an actual increase in the amount of hair loss or due to increased awareness of hair shedding (Sinclair, 2015). Because of this discrepancy, a visual-analog scale, the Sinclair Hair Shedding Scale, was devised to assess normal verses excessive hair shedding in female pattern hair loss (FPHL) subjects. However, the prevalence of hair shedding in females not suffering from FPHL is unknown. To gain better understanding of hair shedding in the general population, we recruited 300 subjects visiting a public hospital for conditions other than alopecia.

2 | MATERIALS AND METHODS

We conducted a survey at a public hospital of 300 female patients from the general population. Patients were interviewed by a dermatologist who assessed the presence or absence of FPHL. No patient reported being pregnant or post-partum. The questionnaire was designed to collect data about patients' age, natural hair color, hair length (short, shoulder length, or long), presence of gray hair, application of hair dye, frequency of hair washing, concomitant medications, and cofounding disease (e.g., anagen and telogen effluvium, cicatricial

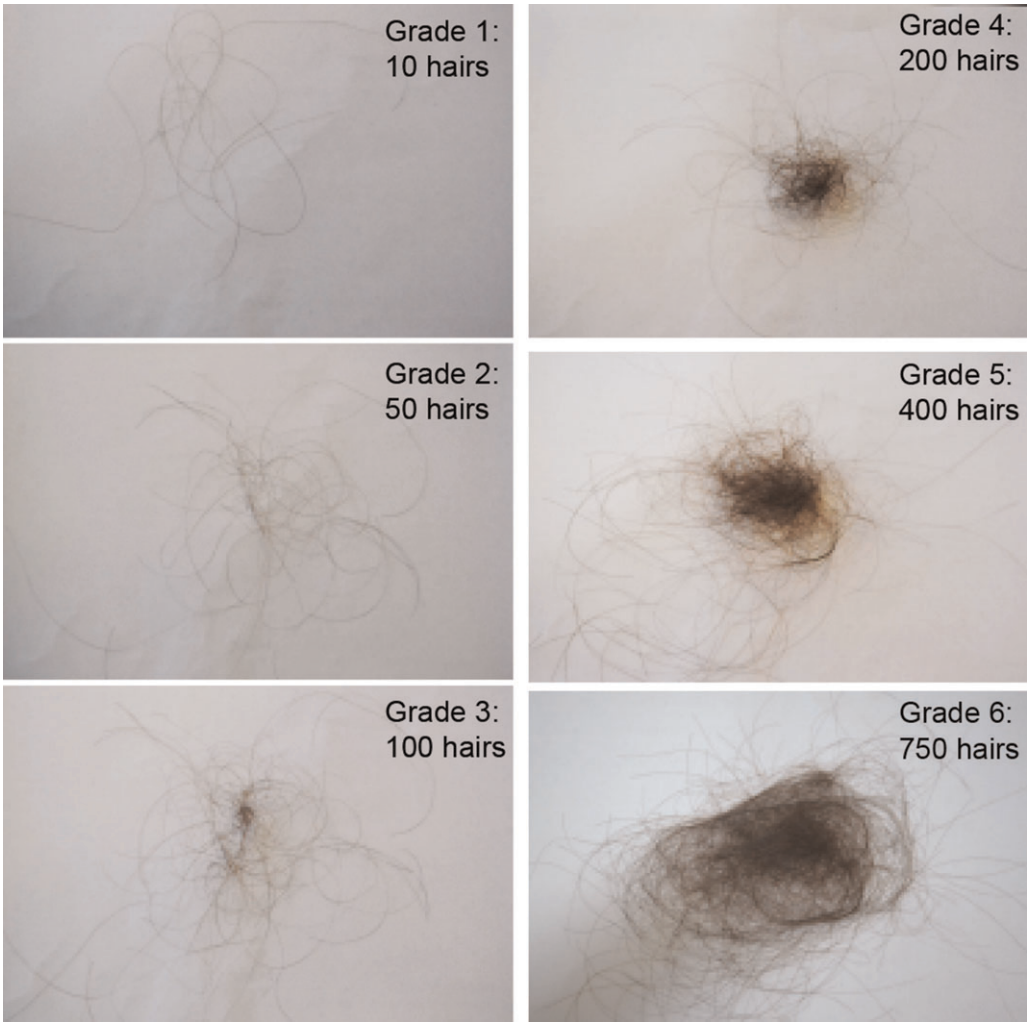

FIGURE 1 Grades 1–6 of the Sinclair hair shedding scale

alopecias, female pattern hair loss [FPHL], alopecia areata or traction alopecia) (Shapiro, 2007). According to Sinclair Hair Shedding Scale, patients were asked to choose photographs that best represented their own hair shedding on washing and on non-washing days. Grades 1–4 were considered normal, while grades 5 and 6 indicated excessive shedding (Sinclair, 2015). Figure 1 is an example of the visual analog scale presented to subjects. While FPHL patients were not recruited in this study, 37 participants were diagnosed with FPHL during the evaluation. No other cofounding disease was diagnosed. Of the 300 study participants recruited, 263 did not suffer from FPHL.

3 | RESULTS

Results of the survey are summarized in Table 1. After tabulating the data of 300 subjects assessed in the study, excessive shedding on hair-washing days was reported in 40% of non-FPHL subjects (104 out of 263). On non-hair-washing days approximately 8% of non-FPHL subjects (22 out of 263) reported excessive shedding. On average, non-FPHL subjects reported washing their hair 2–3 times per week. In FPHL subjects, approximately 60% (21 out of 37) experienced excessive shedding on hair-washing days. On average, the 37 FPHL subjects reported washing their hair 3 times per week. Data obtained from the 263 non-FPHL patients was further subdivided according to age, use of hair coloring, hair length, and number of hair washings per week. Excessive shedding was, surprisingly, inversely proportional to age; with the greatest amount of shedding observed in patients under 50 years of age. We observed a strong correlation between reported shedding and hair length, with the most shedding being reported by subjects with long hair (i.e., hair longer than shoulder-length). Excessive shedding was not correlated to the use of hair dyes and weakly correlated to the frequency of hair washing.

4 | DISCUSSION

A women's hair is an embodiment of youth, health, and beauty. Since ancient times, hair was considered one of the most defining features of a women's appearance. Therefore, hair loss in women remains one of the most impactful quality of life disorders. Increased hair shedding, presenting in many dermatological and non-dermatological conditions, can have psychological impacts, such as, lowering self-esteem and depression (Tabolli et al., 2013). As such, understanding the prevalence of this condition is an important first step. To best of our knowledge, this is the first study to quantify the prevalence of hair shedding among women. While, no treatment currently exists for this condition,

TABLE 1 Excessive Hair Shedding Reported by FPHL and Non-FPHL Subjects on Hair Washing and Non-Hair Washing Days

Female pattern hair loss (FPHL)	**FPHL (–)**	**FPHL (+)**	
Subjects	263	37	
Shedding on washing days	39.5%	59.5%	
CI (95% CL)	5.9%	15.8%	
Shedding on non-washing Days	8.4%	18.9%	
CI (95% CL)	3.4%	12.6%	
Age	<50	>50	
Subjects	220	43	
Shedding on washing days	43.6%	18.6%	
CI (95% CL)	6.6%	11.6%	
Hair coloring	Dye (–)	Dye (+)	
Subjects	96	167	
Shedding on washing days	40.6%	38.9%	
CI (95% CL)	9.8%	7.4%	
Hair length	**Long**	**Medium**	**Short**
Subjects	154	76	33
Shedding on washing days	49.4%	32.9%	9.1%
CI (95% CL)	7.9%	10.6%	9.8%
Frequency of hair washing (per week)	≤2	>2	
Subjects	134	129	
Shedding on washing days	44.0%	34.9%	
CI (95% CL)	8.4%	8.2%	

Data from non-FPHL subjects is further subdivided according to age, use of hair coloring, hair length, and number of hair washings per week. Shedding data is presented as the percent of subjects reporting a score of 5 or more on the Sinclair Scale. The confidence interval (CI) at a 95% confidence level (CL) is reported below each value.

we hope that this study would encourage physicians to address hair loss during clinical encounters and provide psychological support services when needed.

CONFLICT OF INTEREST

There is no conflict of interest.

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