

ORIGINAL RESEARCH

Assessment of hair loss in adults

¹Dr. Shubhshree Misra, ²Dr. Himani Tandon, ³Dr. Bhawna Kapoor

¹Assistant Professor, Department of Dermatology, Venereology & Leprosy, T.S. Misra Medical College & Hospital, Amausi, Lucknow 226008

²Assistant Professor, Department of Dermatology, Venereology & Leprosy, T.S. Misra Medical College & Hospital, Amausi, Lucknow-226008

³Professor, Department of Dermatology, Venereology & Leprosy, T.S. Misra Medical College & Hospital, Amausi, Lucknow-226008

Corresponding Author

Dr. Shubhshree Misra,

Assistant Professor, Department of Dermatology, Venereology & Leprosy, T.S. Misra Medical College & Hospital, Amausi, Lucknow – 226008

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ABSTRACT

Background: Hair loss, also known as alopecia, is a common condition that can affect both men and women of all ages. The present study was conducted to assess patterns of hair loss using trichoscope.

Materials & Methods: 120 patients with hair loss of both genders were recorded. A thorough examination was carried out. In each patient hair pull test and trichoscopy was done. Symptoms and type of lesions were recorded.

Results: Age group 21-30 years had 25, 31-40 years had 20, 41-50 years had 35 and 51-60 years had 40 patients. The difference was non-significant ($P > 0.05$). The most common symptom of presentation was hair fall in 56, thinning of hair in 24, white hair in 5, patchy hair loss in 10, itching in 20 and itchy lesions in 5 cases. The difference was significant ($P < 0.05$). Common diagnosis was discoid lupus erythematosus in 6, FPHL in 14, alopecia areata in 32, canities in 25, hair cast in 5, lichen planopilaris in 5, ophiasis in 1, scalp psoriasis in 14, seborrhic dermatitis in 3, telogen effluvium in 12, tinea capitis in 2, traction alopecia in 2 and trichotillomania in 1 case. The difference was significant ($P < 0.05$). Hair pull test was positive in 72 cases and negative in 48 cases. The difference was significant ($P < 0.05$).

Conclusion: The most common diagnosis was Alopecia Areata followed by canities, Scalp psoriasis, FPHL and Telogen effluvium. Common symptoms were hair fall and thinning of hair.

Key words: Hair loss, Trichoscope, Scalp psoriasis

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Introduction

Hair loss, also known as alopecia, is a common condition that can affect both men and women of all ages. It occurs when hair follicles shrink over time, leading to thinner and shorter hair strands.¹ There are several types and causes of hair loss, and it can be temporary or permanent. Androgenetic alopecia also known as male-pattern baldness or female-pattern baldness, this is the most common type of hair loss. It is influenced by genetics and hormonal factors and usually follows a predictable pattern of hair thinning and loss.² Telogen effluvium occurs when there is a disturbance in the hair growth

cycle, causing more hairs than usual to enter the resting (telogen) phase. It can be triggered by various factors such as stress, illness, surgery, childbirth, rapid weight loss, or certain medications.³ Alopecia areata is an autoimmune condition where the immune system mistakenly attacks hair follicles, leading to sudden hair loss in patches on the scalp or other areas of the body. Traction alopecia is caused by excessive pulling or tension on the hair, often due to tight hairstyles like braids, ponytails, or extensions.⁴ In scarring alopecia, hair follicles are permanently damaged and replaced by scar

tissue, leading to permanent hair loss. Causes can include certain skin conditions, burns, or injuries. Anagen effluvium is usually caused by chemotherapy or radiation therapy, this type of hair loss affects the hair during the active growth phase (anagen), leading to rapid hair shedding.⁵ The present study was conducted to assess patterns of hair loss using trichoscope.

Materials & Methods

The present study comprised of 120 patients with hair loss of both genders. All were enrolled after they agreed to participate in the study.

Data such as name, age, gender etc. was recorded. A thorough examination was carried out. In each patient hair pull test and trichoscopy was done. Symptoms and type of lesions were recorded. P value less than 0.05 was considered significant.

Results

Table I: Distribution of patients

Age group (Years)	Number	P value
21-30	25	0.81
31-40	20	
41-50	35	
51-60	40	

Table I shows that age group 21-30 years had 25, 31-40 years had 20, 41-50 years had 35 and 51-60 years had 40 patients. The difference was non-significant ($P > 0.05$).

Table II: Assessment of symptoms

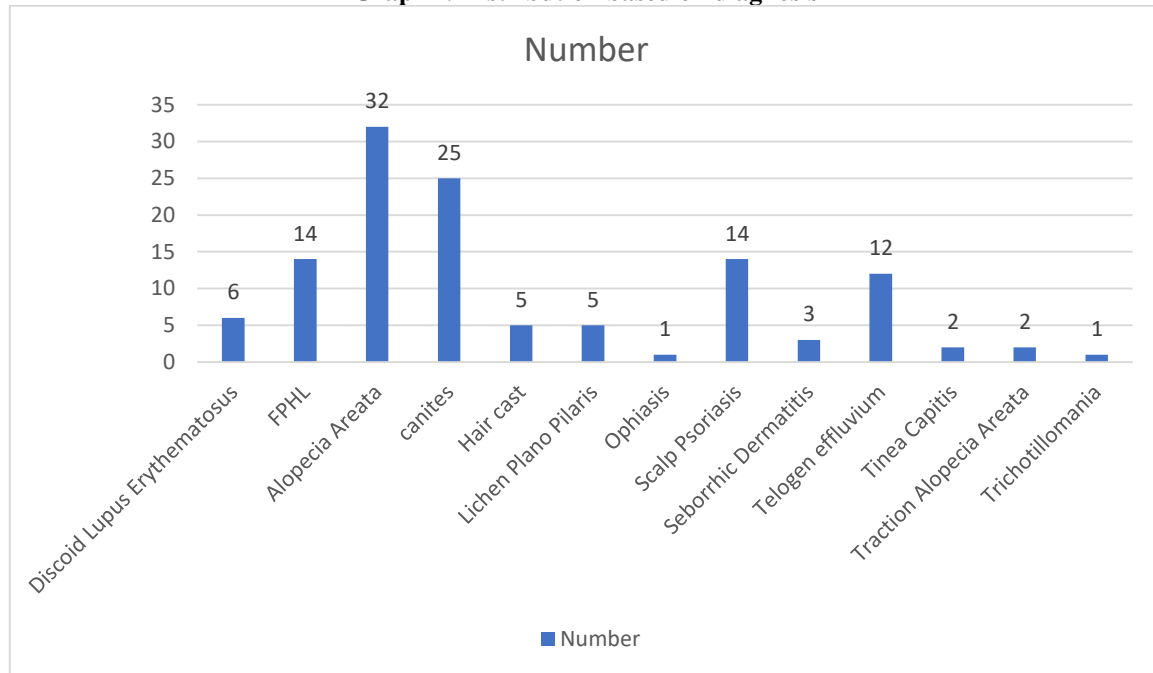
Symptoms	Number	P value
Hair fall	56	0.02
Thinning of hair	24	
White hair	5	
Patchy hair loss	10	
Itching	20	
Itchy lesion	5	

Table II shows that the most common symptom was hair fall in 56, thinning of hair in 24, white hair in 5, patchy hair loss in 10, itching in 20 and itchy lesion in 5 cases. The difference was significant ($P < 0.05$).

Table III: Distribution based on diagnosis

Diagnosis	Number	P value
Discoid lupus erythematosus	6	0.01
FPHL	14	
Alopecia Areata	32	
canites	25	
Hair cast	5	
Lichen planopilaris	5	
Ophiasis	1	
Scalp Psoriasis	14	
Seborrhic Dermatitis	3	
Telogen effluvium	12	
Tinea Capitis	2	
Traction Alopecia Areata	2	
Trichotillomania	1	

Table III, graph I shows that common diagnosis was discoid lupus erythematosus in 6, FPHL in 14, alopecia areata in 32, canites in 25, hair cast in 5, lichen planopilaris in 5, ophiasis in 1, scalp psoriasis in 14, seborrhic dermatitis in 3, telogen effluvium in 12, tinea capitis in 2, traction alopecia areata in 2 and trichotillomania in 1 case. The difference was significant ($P < 0.05$).

Graph I: Distribution based on diagnosis**Table IV Assessment of hair pull test**

Hair pull test	Number	P value
Positive	72	0.05
Negative	48	

Table IV shows that hair pull test was positive in 72 cases and negative in 48 cases. The difference was significant ($P < 0.05$).

Discussion

Regardless of age or gender, hair loss is a concern for everyone, although it affects women more than men.⁶ Every hair on the scalp is replaced every three to five years according to the normal hair cycle.⁷ Many women's identities depend heavily on their hair. Women's hair is symbolically associated with femininity, sexuality, attractiveness, and personality, while men's hair is not. Compared to men, women are more likely to experience reduced quality of life and less social interactions as a result of hair loss. The terminal hair follicles gradually change from being hair follicles to vellus-like follicles, which is the histological hallmark of FPHL.⁸ Additionally, FPHL patients have more follicles in the telogen phase and fewer in the anagen phase of the hair cycle. Female patients are frequently affected by chronic hair loss, but there is little to no objective technology available to help the dermatologist make an accurate diagnosis and track the effectiveness of treatment. In particular, it could be challenging to distinguish between various illnesses and female androgenic alopecia (FAGA), a form of female pattern hair loss.⁹ Alopecia areata, trichotillomania, and tinea capitis, among other hair problems, now have diagnostic features thanks to trichoscopy (scalp dermoscopy), a recent hotspot in the field of trichology. In order to diagnose effluvium and other illnesses, trichoscopy for hair loss

diagnostics is required.^{10,11} The present study was conducted to assess patterns of hair loss using trichoscopy. We found that age group 21-30 years had 25, 31-40 years had 20, 41-50 years had 35 and 51-60 years had 40 patients. The most common symptom of presentation was hair fall in 56, thinning of hair in 24, white hair in 5, patchy hair loss in 10, itching in 20 and itchy lesions in 5 cases. Ravikiran et al¹² extrapolated the demographic variables and clinical features of FPHL and also to identify the possible risk factors associated with it in 100 women with FPHL. FPHL accounted for 15.3% of diffuse hair loss in women. Mean age and mean age of onset of FPHL among the 100 women was 31.26 ± 9.85 years and 28.03 ± 8.05 years respectively. A positive family history was noted in 51% of patients, with no difference in the age of onset of FPHL in patients with family history positive or negative. The most common pattern of hair loss was diffuse hair loss over the vertex (72%), followed by Oslen pattern (16%) and Hamilton pattern (12%). The age specific frequency of the hair loss severity showed an increase in the severity of FPHL with advancing age (Sinclair grade V was 5.8% in third decade to 74.5% in fifth decade). Polycystic ovarian syndrome, hypothyroidism and BMI more than 25 (overweight and obesity) were noted in 23%, 15% and 65% of patients respectively. We observed that common diagnosis was discoid

lupus erythematosus in 6, FPHL in 14, alopecia areata in 32, canities in 25, hair cast in 5, lichen planopilaris in 5, ophiasis in 1, scalp psoriasis in 14, seborrhic dermatitis in 3, telogen effluvium in 12, tinea capitis in 2, traction alopecia in 2 and trichotillomania in 1 case. Hair pull test was positive in 72 cases and negative in 48 cases. Su et al¹³ evaluated factors associated with FPHL and to estimate its prevalence in women. In total, 26,226 subjects aged 30 years assessed the degree of hair loss. Information on possible risk factors for FPHL was collected using a questionnaire interview. The prevalence of FPHL (Ludwig grade >I) for all ages was 11.8% increasing with advancing age. After controlling for age and family history, statistically significant associations were noted between FPHL and high fasting glucose, fewer childbirths, breast-feeding, oral contraceptive use and ultraviolet exposure more than 16 hours per week.

Conclusion

Authors found that the most common diagnosis was Alopecia Areata followed by canities, Scalp Psoriasis, FPHL and Telogen effluvium. Common symptoms were hair fall and thinning of hair.

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