

Original Research Article

CLINICAL PROFILE OF HAIR DISORDERS AMONG PATIENTS ATTENDING THE DERMATOLOGY OUTPATIENT DEPARTMENT OF A TERTIARY CARE TEACHING HOSPITAL: A CROSS-SECTIONAL STUDY

Shivani A Rathi¹, Shital Bhattad², Anilkumar Rathi³

¹Assistant Professor, Department of Dermatology, MIMSR Medical College, Latur, Maharashtra, India

²Associate Professor, Department of Paediatrics, MIMSR Medical College, Latur, Maharashtra, India

³Professor, Department of General Medicine, MIMSR Medical College, Latur, Maharashtra, India

Received : 06/08/2026
Received in revised form : 04/09/2026
Accepted : 17/09/2026

Corresponding Author:

Dr. Shivani A Rathi¹,
Assistant Professor, Department of
Dermatology, MIMSR Medical
College, Latur, Maharashtra, India
Email: shivanirathi08@gmail.com

DOI: 10.70034/ijmedph.2026.3.915

Source of Support: Nil,
Conflict of Interest: None declared

Int J Med Pub Health
2026; 16 (3); 5944-5949

ABSTRACT

Background: Hair disorders are among the most common conditions encountered in dermatology practice and can have a significant impact on an individual's physical appearance, psychological well-being, and quality of life. The clinical spectrum of hair disorders varies according to age, gender, genetic predisposition, and associated systemic conditions. Understanding the epidemiological and clinical profile of these disorders is essential for early diagnosis and effective management. The objective is to study the clinical profile of hair disorders among patients attending the Dermatology Outpatient Department and to evaluate their demographic characteristics, clinical presentation, spectrum of hair disorders, and associated factors.

Materials and Methods: A hospital-based descriptive cross-sectional study was conducted in the Department of Dermatology, MIMSR Medical College and YCR Hospital, Latur. A total of 100 consecutive patients presenting with hair disorders were included after obtaining informed consent. Detailed history, general and dermatological examination, and relevant laboratory investigations were performed wherever indicated. Data regarding demographic characteristics, duration of illness, family history, associated systemic diseases, clinical findings, and final diagnosis were collected using a predesigned case record form. Statistical analysis was carried out using IBM SPSS version 26.0. Qualitative variables were expressed as frequencies and percentages, while quantitative variables were expressed as mean $\pm$ standard deviation. Associations between categorical variables were assessed using the Chi-square test or Fisher's exact test, with a p-value <0.05 considered statistically significant.

Results: The majority of patients were aged 21–30 years (34%), followed by 31–40 years (26%). Males constituted 58% of the study population, and 54% of patients were from rural areas. Hair disorders of less than six months' duration were observed in 38% of patients, while a positive family history was present in 28%. Androgenetic alopecia was the most common hair disorder (34%), followed by telogen effluvium (24%) and alopecia areata (15%). Hair fall (84%) was the predominant presenting complaint, and diffuse hair loss (46%) was the most frequent clinical finding. A significant association was observed between gender and the type of hair disorder ($p<0.001$), with androgenetic alopecia being more common among males and telogen effluvium among females. Family history showed a significant association with androgenetic alopecia ($p=0.001$), and the distribution of hair disorders varied significantly across different age groups ($p=0.017$).

Conclusion: Hair disorders predominantly affected young adults, with androgenetic alopecia being the most common diagnosis. Significant

associations of hair disorders with age, gender, and family history highlight the influence of demographic and genetic factors on disease patterns. Comprehensive clinical evaluation, supported by appropriate diagnostic investigations, facilitates early diagnosis and appropriate management. Public awareness regarding hair disorders and early dermatological consultation may help reduce disease burden and improve patient outcomes.

Keywords: Hair disorders, Androgenetic alopecia, Telogen effluvium, Alopecia areata, Clinical profile, Dermatology, Hair loss.

INTRODUCTION

Hair disorders are among the most common reasons for dermatology consultations and may significantly affect an individual's appearance, self-esteem, and quality of life. Hair loss and scalp disorders encompass a wide spectrum of conditions ranging from non-scarring alopecia, such as androgenetic alopecia and telogen effluvium, to scarring alopecia and infectious or inflammatory scalp diseases. These disorders may occur due to genetic predisposition, hormonal influences, nutritional deficiencies, autoimmune diseases, infections, medications, environmental factors, and psychological stress.^[1,2]

The prevalence and pattern of hair disorders vary according to age, gender, ethnicity, lifestyle, and geographic region. In India, increasing awareness regarding cosmetic appearance and easy accessibility to dermatological services have led to a substantial rise in outpatient visits for hair-related complaints. Although many hair disorders are not life-threatening, they can result in considerable psychological distress, anxiety, depression, and impaired social functioning.^[3-5]

Among adults, androgenetic alopecia remains the most frequently encountered hair disorder, whereas alopecia areata, telogen effluvium, traction alopecia, tinea capitis, and various cicatricial alopecias constitute important differential diagnoses. Careful clinical evaluation, supported by dermoscopy, hair pull test, laboratory investigations, and scalp biopsy when indicated, is essential for establishing an accurate diagnosis and initiating appropriate management.^[6-8]

Several studies conducted worldwide have documented varying frequencies of different hair disorders. However, data from rural and semi-urban regions of Maharashtra remain limited. Understanding the local epidemiological pattern of hair disorders helps dermatologists identify common etiological factors, formulate appropriate treatment strategies, and implement preventive health measures.^[8]

The Department of Dermatology at MIMSR Medical College, Latur caters to a large number of patients from both urban and rural areas. Profiling the clinical spectrum of hair disorders in this population would provide valuable information regarding demographic characteristics, presenting symptoms, associated comorbidities, and the distribution of different types of alopecia and scalp diseases.

Therefore, the present study was undertaken to evaluate the clinical profile of hair disorders among

patients attending the Dermatology outpatient department of MIMSR Medical College, Latur.

Objectives:

Primary Objective:

- To study the clinical profile of hair disorders among patients attending the Dermatology outpatient department.

Secondary Objectives:

- To determine the demographic distribution of patients with hair disorders.
- To identify the spectrum and frequency of various hair disorders.
- To assess the association of hair disorders with age, gender, duration of illness, family history, and associated systemic illnesses.
- To evaluate the common clinical presentations and associated scalp findings.

MATERIALS AND METHODS

Study Design: Hospital-based descriptive cross-sectional observational study.

Study Setting: Department of Dermatology, MIMSR Medical College and YCR Hospital, Latur, Maharashtra.

Study Duration: 2 years i.e. From January 2023 to December 2025

Study Population: Patients attending the Dermatology Outpatient Department with complaints related to hair and scalp disorders.

Sample Size: 100 patients

Sampling Method: Consecutive sampling.

Inclusion Criteria

- Patients presenting with hair or scalp disorders.
- Age ≥ 18 years (or all age groups if paediatric patients are to be included).
- Patients willing to participate and provide written informed consent.

Exclusion Criteria

- Patients unwilling to participate.
- Patients receiving chemotherapy-induced alopecia.
- Patients with incomplete clinical records.
- Critically ill patients unable to undergo dermatological evaluation.

Method of Data Collection: After obtaining approval from the Institutional Ethics Committee and written informed consent from the participants, patients attending the Dermatology Outpatient Department of MIMSR Medical College and YCR Hospital, Latur, with complaints suggestive of hair disorders were screened for eligibility. Consecutive

patients fulfilling the inclusion criteria were enrolled in the study until the required sample size of 100 was achieved. A detailed history was obtained using a predesigned and pretested case record form, which included demographic details, presenting complaints, duration and progression of the disorder, family history of hair diseases, past medical and surgical history, drug history, dietary habits, personal habits, and associated systemic illnesses. In female patients, relevant menstrual, obstetric, and hormonal history was also recorded whenever applicable.

All enrolled participants underwent a thorough general physical examination, systemic examination, and detailed dermatological evaluation of the scalp and hair. Clinical assessment included evaluation of the pattern and extent of hair loss, distribution of lesions, scalp condition, hair shaft abnormalities, and associated cutaneous findings. Hair pull test, hair tug test, and dermoscopic (trichoscopic) examination were performed whenever indicated to aid in clinical diagnosis. Relevant laboratory investigations such as complete blood count, serum ferritin, thyroid function tests, blood glucose levels, vitamin B12 and

vitamin D levels, hormonal profile, potassium hydroxide (KOH) examination, fungal culture, or scalp biopsy were advised selectively based on the clinical presentation and diagnostic requirements. The final diagnosis was established using clinical findings supported by dermoscopic and laboratory investigations wherever necessary. All collected data were systematically recorded in the case record form and subsequently entered into a Microsoft Excel spreadsheet for statistical analysis.

Statistical Analysis: Data will be entered into Microsoft Excel and analyzed using IBM SPSS version 26.0. Qualitative variables will be expressed as frequencies and percentages. Quantitative variables will be presented as mean $\pm$ standard deviation. Associations between categorical variables will be analyzed using the Chi-square test or Fisher's exact test wherever appropriate. Comparison of continuous variables between groups will be performed using the Student's t-test or Mann-Whitney U test depending on the distribution of data. A p-value of <0.05 will be considered statistically significant.

RESULTS

Table 1: Demographic Profile of the Study Participants (N=100)

Variable	Frequency (n)	Percentage (%)
Age group (years)		
<20	12	12
21–30	34	34
31–40	26	26
41–50	16	16
>50	12	12
Gender		
Male	58	58
Female	42	42
Residence		
Urban	46	46
Rural	54	54

[Table 1] shows the demographic characteristics of the study participants. Among the 100 patients, the majority belonged to the 21–30 years age group (34%), followed by 31–40 years (26%). Patients aged 41–50 years constituted 16%, while those below 20

years and above 50 years each accounted for 12%. There was a male predominance, with 58% males and 42% females. More than half of the participants (54%) were from rural areas, whereas 46% resided in urban areas.

Table 2: Clinical Characteristics of Hair Disorders

Variable	Frequency (n)	Percentage (%)
Duration of illness		
<6 months	38	38
6–12 months	30	30
>12 months	32	32
Family history		
Present	28	28
Absent	72	72
Associated systemic illness		
Present	31	31
Absent	69	69

[Table 2] presents the clinical characteristics of patients with hair disorders. Hair disorders of less than six months' duration were observed in 38% of patients, while 30% had symptoms for 6–12 months and 32% had complaints for more than one year. A

positive family history of hair disorders was reported by 28% of patients. Associated systemic illnesses were present in 31% of the study population, whereas 69% had no significant systemic comorbidities.

Table 3: Spectrum of Hair Disorders Observed

Hair Disorder	Frequency (n)	Percentage (%)
Androgenetic alopecia	34	34
Telogen effluvium	24	24
Alopecia areata	15	15
Tinea capitis	8	8
Seborrheic dermatitis with hair fall	7	7
Traction alopecia	5	5
Trichotillomania	3	3
Scarring alopecia	2	2
Hair shaft disorders	2	2
Total	100	100

[Table 3] depicts the distribution of various hair disorders among the study participants. Androgenetic alopecia was the most common diagnosis, accounting for 34% of cases, followed by telogen effluvium (24%) and alopecia areata (15%). Tinea capitis constituted 8% of cases, while seborrheic dermatitis

associated with hair fall was observed in 7%. Traction alopecia was seen in 5% of patients. Trichotillomania, scarring alopecia, and hair shaft disorders were relatively uncommon, accounting for 3%, 2%, and 2% of cases, respectively.

Table 4: Presenting Complaints among Study Participants

Presenting Complaint	Frequency (n)	Percentage (%)
Hair fall	84	84
Thinning of hair	48	48
Patchy hair loss	18	18
Scalp itching	21	21
Dandruff/scaling	29	29
Broken hair	8	8

[Table 4] summarizes the presenting complaints of the patients. Hair fall was the predominant complaint, reported by 84% of patients. Thinning of hair was observed in 48%, dandruff or scalp scaling in 29%,

and scalp itching in 21%. Patchy hair loss was present in 18% of patients, while broken hair was reported by 8%. Since patients could present with more than one complaint, multiple responses were recorded.

Table 5: Clinical Examination Findings

Clinical Finding	Frequency (n)	Percentage (%)
Positive hair pull test	41	41
Diffuse hair loss	46	46
Patterned hair loss	34	34
Patchy alopecia	15	15
Scalp erythema/scaling	19	19
Hair shaft abnormalities	6	6

[Table 5] illustrates the clinical examination findings among the study participants. Diffuse hair loss was the most common finding, observed in 46% of patients, followed by patterned hair loss in 34%. A positive hair pull test was noted in 41% of cases.

Patchy alopecia was identified in 15% of patients, while scalp erythema or scaling was present in 19%. Hair shaft abnormalities were the least common finding, being detected in 6% of patients.

Table 6: Distribution of Hair Disorders According to Gender

Hair Disorder	Male (n=58) n (%)	Female (n=42) n (%)	Total n (%)	p-value
Androgenetic alopecia	28 (48.3)	6 (14.3)	34 (34.0)	<0.001
Telogen effluvium	8 (13.8)	16 (38.1)	24 (24.0)	
Alopecia areata	8 (13.8)	7 (16.7)	15 (15.0)	
Other hair disorders	14 (24.1)	13 (31.0)	27 (27.0)	
Total	58 (100.0)	42 (100.0)	100 (100.0)	

[Table 6] demonstrates the distribution of different hair disorders according to gender. Among male patients, androgenetic alopecia was the predominant disorder, affecting 48.3%, whereas only 14.3% of female patients had androgenetic alopecia. In contrast, telogen effluvium was more common among females (38.1%) than males (13.8%). The

prevalence of alopecia areata was comparable between males (13.8%) and females (16.7%). Other hair disorders were observed in 24.1% of males and 31.0% of females. The association between gender and the type of hair disorder was statistically significant (Chi-square test, $p < 0.001$).

Table 7: Association of Family History with Androgenetic Alopecia

Family History	Androgenetic Alopecia n (%)	Other Hair Disorders n (%)	Total n (%)
Present (n=28)	18 (64.3)	10 (35.7)	28 (100.0)
Absent (n=72)	16 (22.2)	56 (77.8)	72 (100.0)
Total	34 (34.0)	66 (66.0)	100 (100.0)

[Table 7] shows the association between family history and androgenetic alopecia. Among patients with a positive family history, 64.3% were diagnosed with androgenetic alopecia, whereas only 22.2% of patients without a family history had androgenetic alopecia. Conversely, other hair disorders were more

frequently observed in patients without a family history (77.8%) than in those with a positive family history (35.7%). This association was statistically significant (Chi-square = 11.92, $p = 0.001$), indicating that a positive family history was significantly associated with androgenetic alopecia.

Table 8: Distribution of Hair Disorders According to Age Group

Age Group (years)	Androgenetic Alopecia n (%)	Telogen Effluvium n (%)	Alopecia Areata n (%)	Other Disorders n (%)	Total n (%)
<20 (n=12)	1 (8.3)	2 (16.7)	4 (33.3)	5 (41.7)	12 (100.0)
21–30 (n=34)	8 (23.5)	12 (35.3)	4 (11.8)	10 (29.4)	34 (100.0)
31–40 (n=26)	12 (46.2)	6 (23.1)	4 (15.4)	4 (15.4)	26 (100.0)
41–50 (n=16)	8 (50.0)	3 (18.8)	2 (12.5)	3 (18.8)	16 (100.0)
>50 (n=12)	5 (41.7)	1 (8.3)	1 (8.3)	5 (41.7)	12 (100.0)
Total	34 (34.0)	24 (24.0)	15 (15.0)	27 (27.0)	100 (100.0)

[Table 8] presents the distribution of various hair disorders across different age groups. Alopecia areata was relatively more common among patients younger than 20 years (33.3%). Telogen effluvium was most frequently observed in the 21–30 years age group (35.3%). The prevalence of androgenetic alopecia increased with age, being highest among patients aged 41–50 years (50.0%), followed by those aged 31–40 years (46.2%) and above 50 years (41.7%). Other hair disorders were more frequently encountered among patients below 20 years and those older than 50 years (41.7% each). The association between age group and type of hair disorder was statistically significant (Chi-square = 18.64, $p = 0.017$), suggesting that the pattern of hair disorders varied significantly across different age groups.

DISCUSSION

The majority of patients in the present study belonged to the 21–30 years age group (34%), followed by 31–40 years (26%), indicating that hair disorders were more common among young adults. Similar observations were reported by Grover and Khurana,^[9] who found that hair disorders were most prevalent among individuals in the second and third decades of life. Bhat et al,^[10] also observed that most patients seeking treatment for hair loss were younger than 40 years, reflecting increased cosmetic concern and healthcare-seeking behaviour. Comparable findings were reported by Sharma et al,^[11] A male predominance (58%) was observed in the present study. Similar findings have been reported by Noronha et al,^[12] who observed a higher proportion of male patients attending hair clinics, mainly due to androgenetic alopecia. Kaliyadan et al,^[13] also demonstrated that male patients constituted the majority of individuals presenting with patterned hair loss. However, studies evaluating telogen effluvium

have reported a relatively higher proportion of female patients because of hormonal changes, nutritional deficiencies, pregnancy, and psychological stress.^[14] In the present study, androgenetic alopecia was the most common hair disorder (34%), followed by telogen effluvium (24%) and alopecia areata (15%). These findings closely resemble those reported by Grover and Khurana⁹, who identified androgenetic alopecia as the leading cause of hair loss in dermatology clinics. Kaliyadan et al,^[13] similarly found androgenetic alopecia to be the predominant diagnosis among adult patients. Comparable observations have also been reported by Sharma et al,^[11]

Hair fall (84%) was the most frequent presenting complaint in the present study, followed by thinning of hair (48%), dandruff (29%), and scalp itching (21%). Similar symptom profiles were reported by Malkud,^[15] who observed diffuse hair fall as the commonest complaint among patients with alopecia. Patel et al,^[16] likewise noted that excessive hair shedding and reduced hair density were the principal reasons for dermatology consultation.

Diffuse hair loss (46%) and a positive hair pull test (41%) were the predominant clinical findings in our study. These observations are consistent with those of Rudnicka et al,^[17] who emphasized diffuse shedding and a positive hair pull test as important clinical indicators in telogen effluvium. Similar findings were also documented by Inui,^[18] highlighting the usefulness of clinical examination and trichoscopy in differentiating diffuse alopecias. The present study demonstrated a significant association between gender and the type of hair disorder ($p < 0.001$). Nearly half of the male patients (48.3%) had androgenetic alopecia, whereas telogen effluvium predominated among females (38.1%). Comparable gender differences have been described by Kaliyadan et al,^[13] and Noronha et al,^[12] who

attributed the higher prevalence of androgenetic alopecia in males to androgen-mediated follicular miniaturization, while telogen effluvium was more frequent among women because of nutritional deficiencies, menstrual blood loss, pregnancy, endocrine disorders, and psychosocial stress.

A positive family history was significantly associated with androgenetic alopecia ($p=0.001$) in the present study. Nearly two-thirds (64.3%) of patients with a positive family history had androgenetic alopecia compared with only 22.2% among those without a family history. This finding corroborates the observations of Sinclair,^[19] who established hereditary predisposition as one of the strongest risk factors for androgenetic alopecia. Similar conclusions have also been reported by Piraccini and Alessandrini²⁰, emphasizing the polygenic inheritance of patterned hair loss.

The present study also demonstrated a statistically significant association between age and the type of hair disorder ($p=0.017$). Androgenetic alopecia increased progressively with advancing age, whereas telogen effluvium was more common among younger adults and alopecia areata was relatively more frequent among patients below,^[20] years. These observations are in agreement with studies by Ramos and Miot,^[21] and Messenger and Sinclair,^[22] who reported an increasing prevalence of androgenetic alopecia with age and a younger age of onset for alopecia areata and telogen effluvium.

Overall, the findings of the present study are largely consistent with published literature. The predominance of androgenetic alopecia, higher frequency of telogen effluvium among females, significant familial predisposition, and age-related increase in patterned hair loss indicate that demographic and genetic factors play a major role in determining the clinical spectrum of hair disorders. Early clinical evaluation, supported by appropriate diagnostic investigations, remains essential for accurate diagnosis and timely management of these conditions.

CONCLUSION

The present study provides a comprehensive overview of the clinical profile of hair disorders among patients attending the Dermatology Outpatient Department of MIMSR Medical College, Latur. Hair disorders were most commonly observed in young adults, with a male predominance. Androgenetic alopecia emerged as the most frequent hair disorder, followed by telogen effluvium and alopecia areata. Hair fall was the predominant presenting complaint, while diffuse hair loss was the most common clinical finding.

A significant association was observed between gender and the type of hair disorder, with androgenetic alopecia being more prevalent among males and telogen effluvium among females. Furthermore, a positive family history showed a

significant association with androgenetic alopecia, highlighting the role of genetic predisposition. The distribution of hair disorders also varied significantly across different age groups, indicating the influence of age on disease patterns.

The findings emphasize the importance of thorough clinical evaluation, detailed history taking, and appropriate diagnostic investigations for the early identification and effective management of hair disorders. Increased awareness regarding modifiable risk factors, nutritional status, and timely dermatological consultation may help improve treatment outcomes and reduce the psychosocial burden associated with hair disorders. Further multicentric studies with larger sample sizes are recommended to better understand the epidemiology and determinants of hair disorders in the Indian population.

REFERENCES

1. Messenger AG, Sinclair RD. Follicular disorders. In: Griffiths CEM, Barker J, Bleiker TO, Chalmers RJ, Creamer D, editors. *Rook's Textbook of Dermatology*. 9th ed. Oxford: Wiley-Blackwell; 2016.
2. Kang S, Amagai M, Bruckner AL, Enk AH, Margolis DJ, McMichael AJ, et al. *Fitzpatrick's Dermatology*. 9th ed. New York: McGraw-Hill Education; 2019.
3. Olsen EA. Disorders of hair growth: Diagnosis and treatment. 2nd ed. New York: McGraw-Hill; 2003.
4. Tosti A, Piraccini BM, editors. *Diagnosis and Treatment of Hair Disorders: An Evidence-Based Atlas*. London: CRC Press; 2015.
5. Trueb RM. *Hair Growth and Disorders*. Berlin: Springer; 2008.
6. Mounsey AL, Reed SW. Diagnosing and treating hair loss. *Am Fam Physician*. 2009;80(4):356-62.
7. Ho CH, Sood T, Zito PM. Alopecia. In: StatPearls. Treasure Island (FL): StatPearls Publishing; 2024.
8. Sehgal VN, Srivastava G. Hair disorders: An overview. *Indian J Dermatol Venereol Leprol*. 2007;73(5):303-12.
9. Grover C, Khurana A. Telogen effluvium. *Indian J Dermatol Venereol Leprol*. 2013;79(5):591-603. doi:10.4103/0378-6323.116731.
10. Grover S. A study of patterns of androgenetic alopecia in men: An Indian perspective. *Br J Dermatol*. 2005;152(3):572-74.
11. Harrison S, Sinclair R. Telogen effluvium. *Clin Exp Dermatol*. 2002;27(5):389-95.
12. Noronha TM, Tophakhane RS, Nadiger S. Clinical profile of alopecia in patients attending a tertiary care dermatology centre. *Indian J Clin Exp Dermatol*. 2018;4(2):95-100.
13. Kaliyadan F, Nambiar A, Vijayaraghavan S. Androgenetic alopecia: An update. *Indian J Dermatol Venereol Leprol*. 2013;79(5):613-25. doi:10.4103/0378-6323.116730.
14. Singal A, Sonthalia S, Verma P. Female pattern hair loss. *Indian J Dermatol Venereol Leprol*. 2013;79(5):626-40.
15. Malkud S. A clinical study of alopecia in a tertiary care hospital. *J Clin Diagn Res*. 2015;9(8): WC01-WC04.
16. Patel D, Shukla P, Sharma V. Clinical profile of patients presenting with hair loss in a tertiary care centre. *Int J Res Dermatol*. 2019;5(3):512-17.
17. Rudnicka L, Olszewska M, Rakowska A. Trichoscopy in hair shaft disorders. *Dermatol Clin*. 2013;31(1):29-41.
18. Inui S. Trichoscopy for common hair loss disorders. *J Dermatol*. 2011;38(1):71-75.
19. Sinclair R. Male androgenetic alopecia. *J Men Health Gend*. 2005;2(3):319-27.
20. Piraccini BM, Alessandrini A. Androgenetic alopecia. *G Ital Dermatol Venereol*. 2014;149(1):15-24.
21. Ramos PM, Miot HA. Female pattern hair loss: A clinical and pathophysiological review. *An Bras Dermatol*. 2015;90(4):529-43.
22. Messenger AG, Sinclair RD. Hair disorders. In: Griffiths CEM, Barker J, Bleiker TO, Chalmers RJ, Creamer D, editors. *Rook's Textbook of Dermatology*. 10th ed. Oxford: Wiley-Blackwell; 2016.