

Clinical Profile of Patchy Alopecia: Report from a Tertiary Care Hospital of Bangladesh

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Abstract

Background: Patchy alopecia is a common dermatological problem worldwide with a high degree of phenotypic and genotypic variation influenced by genetic and environmental factors and is often a major source of psychological distress to patients. However, there is limited published data on patchy alopecia in Bangladesh. The purpose of this study was to evaluate the clinical pattern and prevalence of patchy alopecia in Bangladeshi patients.

Materials and methods: This is a descriptive cross-sectional study which was carried out in the Department of Dermatology and Venereology of Chittagong Medical College Hospital, Bangladesh, between the periods of September 2018 to December 2019.

Results: Out of 259 patients, male were 169 (65.3%) and female were 90 (34.7%) with a male to female ratio 1.8:1. The mean age of the study population was 23.73 ± 12.735 SD (Range: 1-65) years. The mean age of onset was 22.67 ± 12.735 SD (Range: 0-65) years. Non Cicatricial Alopecia (NCA) were accounted 192 (74%) and rest of the 67 (26%) were Cicatricial Alopecia (CA) patients. Alopecia Areata (AA) 172 (66.4%) was the most common 192 (74%) NCA while alopecia due to Discoid Lupus Erythematosus (DLE) 34(13.1%) was the most common 67 (26%) CA. Most of the patients 158 (61%) had multiple patches. Among 259 patients, 77 (29.73%) patients had associated pruritus, 44 (16.98%) patients had scaling and 49 (18.9%) patients were atopic.

Conclusion: This study finding showed that patchy hair loss results from a variety of causes. Proper identification and differentiation of pattern of patchy alopecia is necessary for early diagnosis and to design appropriate treatment and by all these means to improve the quality of life.

Key words: Cicatricial alopecia; Non cicatricial alopecia; Patchy alopecia.

INTRODUCTION

Alopecia is a condition, which results in loss of hair from one's head or other body parts where hair is naturally supposed to be found. The distressful condition causes low self-esteem affecting patients psychologically and socially.¹ There are diverse categories of alopecia but the commonest are androgenic alopecia (Common baldness) AA and chemotherapy induced alopecia.² The two basic categories of alopecia are cicatricial or scarring and Non Cicatricial or non-scarring alopecia. NCA are more frequent than CA.³

Population studies from the Rochester Epidemiology Project estimate a lifetime incidence of AA of 2.1%, in a population in Olmsted County, Minnesota, with no difference in incidence between genders.⁴ A systemic review of the epidemiology of AA indicated a similar worldwide lifetime incidence of around 2%.⁵ Tinea capitis most commonly infects children between 3 and 7 years of age. Some studies show no gender predilection, while others report an increased prevalence among boys, and other report highest prevalence among African-American girls.^{6,7} Trichotillomania typically has a pre-pubertal to young adulthood age of onset.⁸

Cicatricial forms of alopecia account for about 3.2% of all trichologic consultations.⁹ And the frequency of CA is about 5.0–7.3% of all the hair loss cases.¹⁰ Frontal Fibrosing Alopecia (FFA), Discoid Lupus Erythematosus (DLE), Lichen Planopilaris (LPP), Folliculitis Decalvans (FD) are some of the most common forms of cicatricial hair loss.³ FD, Dissecting Cellulitis (DC) and Acne Keloidalis Nuchae (AKN) were more common in males, while central Centrifugal Cicatricial Alopecia (CCCA), LPP, DLE and Pseudopelade of Brocq (PPB) had a female predominance. The mean age of patients with DLE, DC and AKN were younger, while patients with CCCA, LPP, PPB and FD tend to be older.¹¹

There is a scarcity of epidemiological data regarding patchy alopecia in this country. Most of the study result originated from western world. So, this study is designed to describe the clinical pattern and prevalence of patients with patchy alopecia attending the department of Dermatology and Venereology at Chittagong Medical College Hospital (CMCH), Bangladesh.

MATERIALS AND METHODS

This descriptive cross-sectional study was conducted during the period from September 2018 to December 2019 at the Outpatient Department of Dermatology and Venereology at CMCH. Total 259 patients were assessed for the eligibility. All the eligible patients were invited to participate in the study by written informed consent. After consenting, a pre-tested semi structured questionnaire and checklist containing history and examination finding of the patient was used to collect data. Demographic characteristics, clinical history, co morbid conditions, precipitating factors, dermatological examination including hair examination, nail examination, mucous membrane examination, skin examination, several clinical tests including hair pull test, trichoscopy was thoroughly observed to find out the proper diagnosis. Data was collected by the investigators through face to face interview.

Patient with patchy alopecia of both sexes with all age group were included. Alopecia other than patchy alopecia and patients' having severe co-morbid conditions requiring hospitalization were excluded.

All the data were checked and edited after collection and compiled in an Excel spread sheet to prepare a master sheet. Analysis was done with the help of SPSS (Statistical package for social sciences, version 25). Qualitative variables were expressed as frequency and percentage and continuous variables were expressed as mean (\pm Standard deviations) or median (Range).

Ethical approval was taken before starting the study from the Ethical Review Committee of CMCH.

RESULTS

Out of 259 cases, most of the patients 95 (36.7%) were 20-29 years age group with overall mean \pm SD age was 23.73 \pm 12.735 (Range: 01-65) years (Table I). There were male predominance in the study (Male: 169 and Female: 90) with a sex ratio of

1.8:1 [Figure 1]. Most of the patients 158 (61%) had multiple patches [Figure 2]. The mean age of onset of disease was 22.67 \pm 12.735 SD (Range: 0-65) years. Among 259 patients, 77 (29.73%) patients had associated pruritus, 44 (16.98%) patients had scaling and 49 (18.9%) patients was atopic [Table II]. NCA were accounted 192 (74%) and rest of the 67 (26%) were CA patients. Maximum patients suffered from AA, 172 (66.4%). Among the CA, 34 (13.1%) had DLE, 20 (7.7%) were LPP and 14 (5.4%) had Tinea capitis [Table III].

Table I Distribution of respondents according to age (n=259)

Characteristics	Frequency (n=259)	Percentage (%)	
Age	Years		
Age category	1-9 years	42	16.2
	10-19 years	48	18.5
	20-29 years	95	36.7
	30-39 years	16	6.2
	40-49 years	48	18.5
	50 years & above	10	3.9
Mean (\pm SD)		23.73 (\pm 12.735)	
Range		1-65	

SD: Standard Deviation, Data are expressed as frequency (Percentage).

Table II Clinical history of the disease among respondents (n=259)

Characteristics	Frequency (n=259)	Percentage (%)	
Age of onset (Years)	Mean (\pm SD)	22.67 \pm 12.735	
	Range	1-65	
Associated symptoms	Absent	138	53.28
	Pruritus	77	29.73
	Scaling	44	15
History of atopy	Absent	210	81.1
	Present	49	18.9

H/O: History of data is expressed as frequency (Percentage) and mean \pm SD with range

Table III Pattern of patchy alopecia among respondents

Diagnosis	(n=259)	%
Non Cicatricial Alopecia (NCA)	192	74
Alopecia areata (AA)	172	66.4
Tinea capitis	14	5.4
Trichotillomania	6	2.2
Cicatricial Alopecia (CA)	67	26
Discoid Lupus Erythematosus (DLE)	34	13.1
Lichen planopilaris (LPP)	20	7.7
Folliculitis decalvans (FD)	5	1.9
Kerion	3	1.2
Pseudopelade of Brocq	2	0.8
Nevus sebaceous	1	0.4
Frontal fibrosing alopecia	1	0.4
Aplasia cutis congenita	1	0.4

H/O: History of data are expressed as frequency (Percentage).

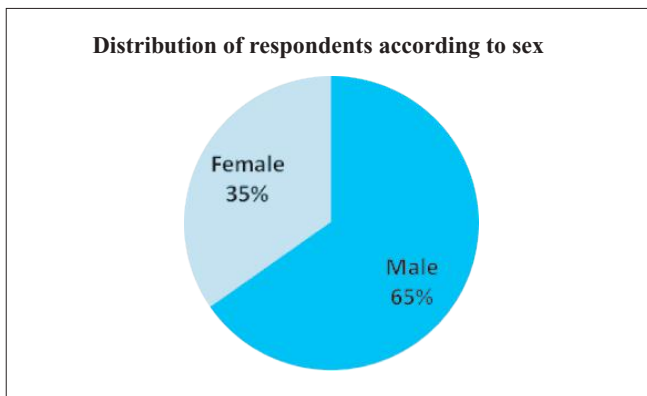


Figure 1 Distribution of respondents according to sex (n=259)

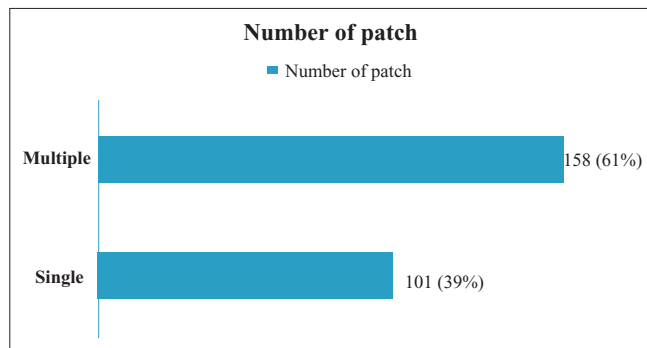


Figure 2 Number of patch in patchy alopecia

DISCUSSION

This single centered, descriptive cross-sectional observational study was conducted between the periods of September 2018 to December 2019 in the Department of Dermatology and Venereology of CMCH, Chattogram, Bangladesh. The present study was conducted to find out clinical pattern and prevalence of patchy alopecia in Bangladeshi male and female.

A wide range of patient age (1-65 years) was seen in the present research due to the inclusion criteria and the mean age of the study population was 23.73 ± 12.735 SD. This finding are similar to other recent studies where Husain et al. reported the mean age was 27 ± 7.92 years and Jha et al. showed the mean age was 24.43 years.¹²⁻¹³

There were 169 (65.3%) male and 90 (34.7%) female with a sex ratio of 1.8:1. Increased male patients have also been supported by other findings in study by Husain et al. from Bangladesh where 17 were male and 13 were female.¹² Another recent Indian studies by Sharma et al. reported 156 (52%) were female and 144 were male (48%) with a female-to-male ratio as 1.08:1.¹⁴ In the present study increased number of male could be due to increased attendance of male at CMCH and by the capability of male travelling to the distance to hospital and women in general are poorly represented in hospital statistics due to socio-economic and cultural difficulties in our background.

The mean age of onset was 22.67 ± 12.735 SD (Range: 0-65) years. This may be as current study was a hospital based study and greater demand for treatment among younger age group. In

a study done by Hegde et al. the mean age of onset was 23.58 years whereas Ranawaka et al. reported that 63.3% had the age of onset at 18-35 years of range.^{15,16} These values were similar when compared to observations in present study.

In present study 77 (26.3%) patients had associated pruritus and 44 (15%) had scaly lesions. Sharma et al. corroborated that most of their cases presented with scaly, pruritic and patchy hair loss 180 (60%), asymptomatic non-scaly patchy hair loss 60 (20%), diffuse hair loss 45 (15%), followed by hair color, and textural changes 9 (3%).¹⁴

Among 259 patients, 49 (18.9%) had personal history of atopy. Atopy has been associated with an earlier age of onset and more severe AA compared with non-atopics as observed in current study.

Among the patients with patchy alopecia, it was observed that majority (61%) of the patients had multiple patches. Contradictory to this finding some recent Indian studies reported that majority of their patients (61% to 80%) had single patch.^{17,18} This inconsistency is probably multifactorial, with a possible factor being the inclusion criteria, duration of diseases and sample size. However, previous literature demonstrated that, there was no correlation between the number of patches and subsequent disease severity.¹⁹

Regarding pattern of patchy alopecia among 259 patients, 192 (74%) were NCA and rest of the 67 (26%) were CA patients. Increased NCA patients have also been described in different study. Study by Sharma et al. (2019)¹⁴ reported that scalp hair loss was non cicatricial in 275 (91.66%), and cicatricial in 25 (8.33%) cases, with the ratio of being 11:1, emphasizing that non cicatricial alopecia was much more common.¹⁴

Among NCA patients, 172 (66.4%) were suffering in AA followed by 14 (5.4%) tinea capitis and 6 (2.3 %) had trichotillomania. Among CA patients, 34 (13.1%) were DLE, followed by 20 (7.7%) had LPP, 5 (1.9%) had FD and 3 (1.2 %) had kerion.

A study done by Hegde et al. revealed that patchy alopecia was the most common pattern of AA seen in 55 (73.3%) patient and Sharma et al. described that most common disorder was tinea capitis in 166 (55.33%) cases followed by AA in 53 (17.66%), seborrheic dermatitis in 16 (5.33%), pediculosis with secondary infection in 11 (3.66%) uncommon causes were LP in 8 (2.66%), tractional alopecia in 7 (2.33%), telogen effluvium in 6 (2%), nevus sebaceous in 6 (2%), occipital neonatal alopecia in 4 (1.33%), ectodermal dysplasia in 4 (1.33%), scalp psoriasis in 3 (1%), trichotillomania in 3 (1%) and alopecia due to nutritional deficiency in 3 (1%).^{15,14} Several rare causes were identified in this study such as FD in 2 cases, PPB in 2 cases, and 1 patient each of alopecia due to lamellar ichthyosis, aplasia cutis congenita, atrichia congenita, DLE, monilethrix, systemic lupus erythematosus alopecia. This is quite different from that of other studies conducted worldwide.

LIMITATION

The study has some limitations: Firstly, it is conducted in a tertiary care hospital with a sample size of 259 cannot be extrapolated to the general population. Secondly, number of patients were limited in certain types of patchy alopecia may not reflect true scenario of Bangladesh and therefore requires expansion to the wider range of diseases.

CONCLUSION

Hair is significant for both cosmetic and functional purposes. At the onset of symptoms, hair loss usually produces the most severe psychological misery in both sexes, negatively impacting the patient's self-image and self-esteem. Early detection of pathology leads to better treatment outcomes, as well as psychological and cosmetic benefits.

DISCLOSURE

All the authors declared no competing interest.

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