



Impact on Quality of Life in Patients with Alopecia Areata and Androgenetic Alopecia: A Cross-Sectional Observational Study at A Tertiary Care Centre in Eastern Bihar

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Abstract

Introduction: Alopecia is a dermatological condition characterized by the loss or reduction of hair. Alopecia areata (AA) and androgenetic alopecia (AGA) are fairly common forms of hair loss that can significantly impact person’s quality of life which may lead to loss of self-confidence and distorted body image. This study evaluates the quality of life (QoL) in individuals diagnosed with AA and AGA attending a tertiary centre using the Dermatology Life Quality Index (DLQI) questionnaire.

Aim and Objectives: To find out the impact of alopecia areata and androgenetic alopecia on quality of life.

Methodology: A cross-sectional observational study was done in a tertiary centre in eastern Bihar. Newly diagnosed patients with AA and AGA presenting to the out-patient department were enrolled in this study who were not on treatment. After taking prior consent and approval from the institutional ethics committee patients were subjected to clinical examination and appropriate investigations, and DLQI questionnaires to evaluate the QoL of the patients.

Results: In present study, a total of 72 patients were enrolled among which 41 were males and 31 were females. There were 30 patients of AA and 42 patients of AGA. The commonest age group affected was between 18 - 28 years of age. The mean DLQI score of AA was 7.833 and mean DLQI score of AGA was 9.595.

Conclusion: Hair is considered as a symbol of youth, vigour and beauty and untimely loss is associated with psychological impact which, in many may be profound. Both AA and AGA moderately affected the QoL of the patients not only in physiological aspects but also in their emotional and social aspects. Thus, patient - oriented outcomes are important in measuring the burden of disease in order to plan appropriate management to improve the illness and quality of life.

Keywords: Alopecia, Alopecia Areata, Androgenetic Alopecia, Hair loss, Quality of life

Introduction

Physicians may regard alopecia is a relatively mild skin disease, but many patients with alopecia consider their hair loss to be a serious problem leading to distress in their day today life, which in turn negatively affect their activities of daily living. Hair is a very important component of self-image, patients with alopecia may develop a distorted body image and get negative feelings.¹ Reid et al reported that some patients regard their alopecia as a more serious problem than do their dermatologists.² Therefore, it is important to understand the impact of alopecia on the quality of life (QoL) of patients.

Studies reported that the QoL of patients with hair loss was lower than that of patients with cardiovascular disease, diabetes, and cancer.³ In recent years, the importance of QoL has been widely accepted to assess the therapeutic effects in patients with hair loss.⁴

Physicians use the severity of the signs and symptoms of disease to assess alopecia, while patients focus on impaired activities and their QoL. Therefore, it is very important to understand the impact of alopecia on the QoL of patients while assessing its severity⁵. Different instruments and questionnaires are used to assess the QoL of patients with alopecia. In 1994, Finlay and Khan⁶ developed the Dermatology Life Quality Index (DLQI) questionnaire to assess the QoL of patients with different skin diseases, and it has been widely used to assess alopecic severity in many countries.^{7,8} DLQI is a compact questionnaire, consisting of 10 questions addressing symptoms and feelings, daily activities, leisure, work and school, personal relationships, and treatment.⁶ The patients' scores on the DLQI range from 0 to 30, with higher scores indicating worse QOL. Given that alopecia areata (AA) and androgenetic alopecia (AGA) are the main types of hair loss in People's Republic of China, the purpose of this study was to assess the QoL of patients with AA and AGA in Chinese patients using DLQI.

Alopecia is a dermatological condition characterized by the loss or reduction of hair. Alopecia areata (AA) and androgenetic alopecia (AGA) are fairly common forms of hair loss that can significantly impact person's quality of life which may lead to loss of self-confidence and distorted body image. This study evaluates the quality of life (QoL) in individuals diagnosed with AA and AGA attending a tertiary centre using the Dermatology Life Quality Index (DLQI) questionnaire. There are several studies regarding DLQI in patients with AGA and AA in abroad and other parts of India, but there is paucity of data from this eastern part of the country. So, the present study was carried out to give an insight on the subject,

with an objective to assess the impact of alopecia areata and androgenetic alopecia on quality of life.

Materials & Method

A cross-sectional observational study was carried in Dermatology Venereology and Leprosy Out Patient Department of Mata Gujri Memorial Medical College and Lion Seva Kendra hospital, Kishanganj, Bihar. Newly diagnosed patients with AA and AGA presenting to the out-patient department were enrolled in this study who were not on treatment. All together 72 patients with hair loss – both androgenetic alopecia and alopecia areata in 3months period were recruited in the study. Untreated patients of AGA and AA 18 years or above age were included in the study. Patients with AGA or AA not willing to give consent, or patients on treatment or with psychiatric comorbidities were excluded from the study. After taking informed consent and approval from the institutional ethics committee patients were subjected to clinical examination and appropriate investigations as per need, and DLQI questionnaires to evaluate the QoL of the patients.

Methods

The DLQI questionnaire consisted of 10 questions regarding symptoms and feelings, daily activities, leisure, work and school, personal relationships, and treatment as dimensions of life. Each item was scored on a scale of 0–3 points. Scores were added to yield a total DLQI of 0–30 points; higher scores indicated greater impact on the patient's QoL.

The aim of this questionnaire is to measure how much your skin problem has affected your life over the last week.

Please tick one box for each question.

Q.1. Over the last week, how itchy, sore, painful or stinging has your skin been? (symptoms)

Q.2. Over the last week, how embarrassed or self-conscious have you been because of your skin? (embarrassment)

Q.3. Over the last week, how much has your skin interfered with you going shopping or looking after your home or garden? (shopping, daily activities)

Q.4. Over the last week, how much has your skin influenced the clothes you wear? (Clothes)

Q.5. Over the last week, how much has your skin affected any social or leisure activities? (social, leisure)

Q.6. Over the last week, how much has your skin made it difficult for you to do any sport? (Sport)

Q.7. Over the last week, has your skin prevented you from working or studying? if “no” over the last week, how much has your skin been a problem at work or studying? (Work or study)

Q.8. Over the last week, how much has your skin created problems with your partner or any of your close friends or relatives? (relationships)

Q.9. Over the last week, how much has your skin caused any sexual difficulties? (Sexual difficulties)

Q.10. Over the last week, how much of a problem has the treatment for your skin been, for example by making your home messy, or by taking up time? (Treatment)

Notes: Each question is answered “Very much” (score 3), “A lot” (score 2), “A little” (score 1), or “Not at all” (score 0). The first part of question 7 has the choices “Yes” (score 3), “no”, or “not relevant” (score 0). The maximum score (indicating highest possible impairment of quality of life) is 30 and the minimum 0. reproduced from Finlay AY, Khan GK. Dermatology Life Quality Index (DLQI) – a simple practical measure for routine clinical use. Clin Exp Dermatol. 1994;19(3):210–216.⁶
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Statistical analysis

The results were analysed using Student's t-test. Differences were considered significant if P-value was, 0.05. The data were processed using an SPSS software package (SPSS 13.0 Inc., Chicago, IL, USA).

Result and Observations

In present study, a total of 72 patients were enrolled (as shown on Figure 1 & Table 1), among which 41 (56.94%) were males & 31 (43.06%) were females. There were 30 (41.67%) patients of AA and 42 (58.33%) patients of AGA. The commonest age group affected was between 18 to 28 years of age group followed by 29 to 39 years and least in 40 to 50 years' group (as shown on Figure 2). The mean DLQI score of 8.861 ± 4.783 (as in Table 2) represented a moderate impairment in quality of life. Among them the mean DLQI score of AA was

7.833 and mean DLQI score of AGA was 9.595. The mean DLQI score was higher in AGA patients (9.595 ± 4.575) than those with AA (7.833 ± 4.955), as shown on figure 3. The mean age of the study population: 26.9 years, the mean score of females (9.194 ± 4.362) was higher than males (8.609 ± 5.118), the female patients with alopecia had higher negative impact in overall assessment. In the DLQI measurement the maximum impairment found in symptoms & feelings & social activities sub-domains. Questions pertaining to embarrassment & social & leisure activities had higher impairment score. The patients with hair loss for a duration of ≥ 12 months had higher DLQI scores as shown on Table 3. Results and observations were tabulated and graphically represented.

Gender Distribution

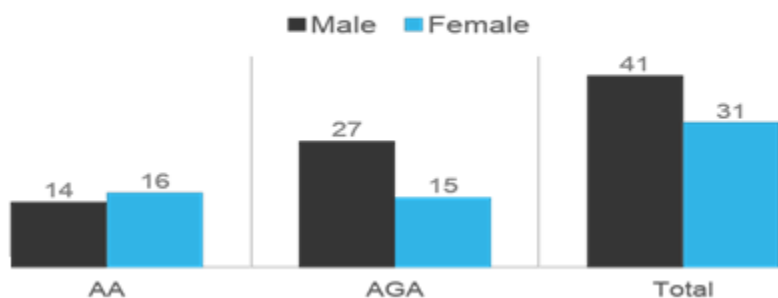


Table 1: Pattern of hair loss with DLQI

Types of Hair Loss	Total Patients	Percentage	DLQI
AA	30	41.67	7.833
AGA	42	58.33	9.595
Total	72	100	

Figure 2: Age Distribution of AA and AGA

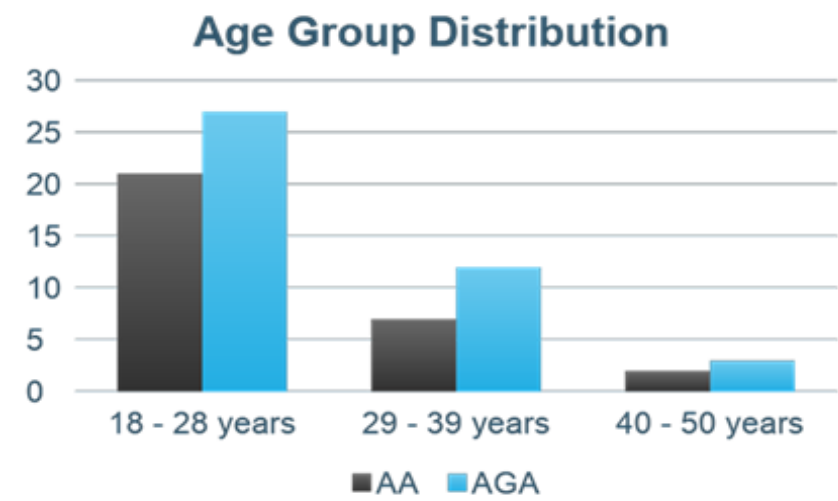


Table 2: Gender Distribution with DLQI score

Gender	Case	Mean DLQI Score
Male	41	8.609 ± 5.118
Female	1	9.194 ± 4.362
Total	72	

Figure 3: DLQI Questionare

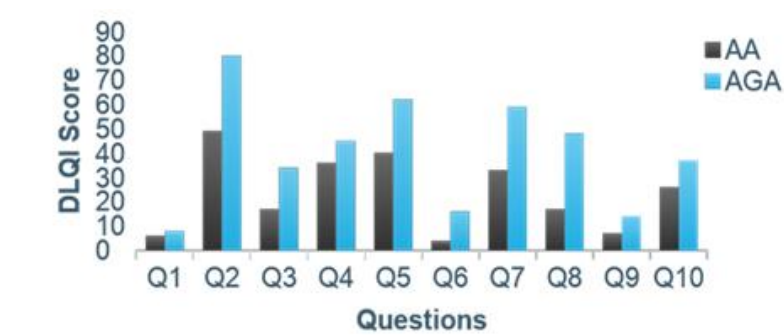


Figure 4: Duration of Hair loss

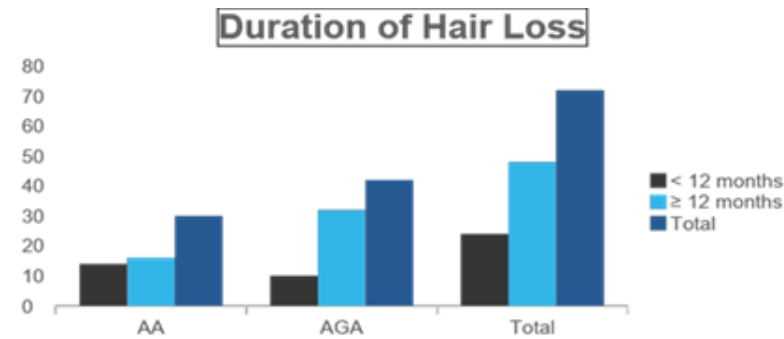


Table 3: Duration of Hair loss with mean DLQI

Duration	AA	AGA	Total	Mean DLQI Score
<12 months	14	10	24	4.875 ± 0.797
≥12 months	16	32	48	10.854 ± 0.558

Figure 5 (A & B): Alopecia Areata



Figure 6 (A, B & C): Androgenic Alopecia



Discussion

Hair is considered as a symbol of youth, vigour and beauty and untimely loss is associated with psychological impact which, in many, may be profound.^{5,6} In the present study, the mean DLQI score of 8.86 ± 4.783 represented a moderate impairment in

quality of life. AGA (9.595 ± 4.575) patients were more severely affected than those with AA (7.833 ± 4.955). In a similar study from PRC by Zhang M et al., the mean score was 6.3. However, those with AA (8.16 ± 7.56) had significantly higher impact as compared to AGA (5.51 ± 5.03) in that study.¹³ The AA patients in study by

Paudel S et al., had lower SALT score (Mean % 4.5 ± 5.379), and this could be the reason for lower DLQI score in that study. Similar scores (5.4 ± 6.8) were also seen by Abedini et al.,¹⁴ with less than 25% alopecic area involvement.

Females are usually more enamoured with their hair and its loss either in patchy or diffuse form troubles them a great extent. Similar inference was made with our finding of significantly high DLQI score in females than in males. Women had higher impact in the two subdomains, viz., Symptoms and Feelings and Daily Activities, when compared to males.

When the mean DLQI scores of the different subsets of the study population with educational level attained,

Table 4: Comparison between the studies

Parameters	Present Study	Zhang M et al.	Paudel S et al.
Mean DLQI score	8.861 ± 4.783	6.3 ± 6.3	8.16 ± 6.126
Mean DLQI of AA	7.833 ± 4.955	8.16 ± 7.56	5.65 ± 5.41
Mean DLQI of AGA	9.595 ± 4.575	5.51 ± 5.03	9.45 ± 6.09
Higher DLQI score associated factors	-AGA -Female gender -Younger age -Duration ≥ 12 months	AA Female gender Younger age Duration ≥ 12 months	AGA Female gender Younger age Duration ≥ 12 months

Conclusion

Hair is considered as a symbol of youth, vigour and beauty and untimely loss is associated with psychological impact which, in many patients, may be profound. Both AA and AGA moderately affected the QoL of the patients not only in physiological aspects but also in their emotional and social aspects. A higher DLQI score was found to be associated with younger age, and hair loss duration of ≥ 12 months and with AGA. There is a need to adequately address the problems of daily living and bio-psycho-social concerns

employment status, recurrent or primary AA, family history, and marital status were compared, only the presence of family history seemed to cause greater psychological impact. Any first degree relative with hair loss similar to the patient would create negative perception about his/her hair loss in the patient. Onset of AA seems to be earlier in females as compared to males. In both the disease conditions, females had a greater QoL impairment. Age and duration of the disease were similar in both sexes and dermatological conditions.

The following table no. 4 is a comparison between my study with the other studies:

of these patients. Thus, patient - oriented outcomes are important in measuring the burden of disease in order to plan appropriate management to improve the illness and quality of life.

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