Clinical Patterns and Prevalence of Psoriasis in a Tertiary Healthcare Facility in Bangladesh

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Abstract: *Background:* Psoriasis is a chronic inflammatory skin condition characterized by the rapid proliferation of skin cells, leading to scaling, pruritus, and inflammation. Understanding the age-related patterns of presentation and onset, as well as the associated symptoms and predisposing factors, is crucial for effective management. *Objective:* This study aims to investigate the age at presentation and onset of psoriasis, identify the most common symptoms, and explore the predisposing factors contributing to the disease among patients. *Methods:* A cross-sectional analysis was conducted on psoriasis patients, collecting data on age at presentation and onset, symptoms experienced, and potential predisposing factors. The data were analyzed to determine prevalence rates and patterns. *Results:* The findings reveal a significant prevalence of psoriasis presentation in the 40 to 49 age group (19.35%), with the highest onset occurring between 30 and 39 years (22.58%). Scaling and moderate pruritus was reported as the most common symptom (77.42%), while physical and emotional stress emerged as key predisposing factors. Plaque psoriasis was identified as the predominant type among patients. *Conclusion:* This study underscores the importance of understanding age-related patterns and common symptoms in psoriasis. The identification of stress as a significant trigger highlights the need for targeted management strategies. Variations in symptom prevalence and predisposing factors warrant further investigation to enhance the understanding of psoriasis and improve treatment approaches across different populations.

Keywords: Psoriasis, Age at onset, Symptoms, Predisposing factors, Plaque psoriasis.

Article at a glance:
Study Purpose: Investigates the age at presentation and onset of psoriasis, symptoms, and predisposing factors in Bangladesh.
Key findings: Most cases present between ages 40-49; onset peaks at 30-39 years. Scaling and pruritus are the most common symptoms, with stress as a major trigger.
Newer findings: Highlights emotional and physical stress as key predisposing factors and emphasizes the high prevalence of plaque psoriasis in Bangladesh.
Abbreviations: BSA – Body Surface Area, PsA – Psoriatic Arthritis, HDL – High-Density Lipoprotein, DM – Diabetes Mellitus, CVD – cardiovascular diseases.

INTRODUCTION

Psoriasis is a chronic, immune-mediated skin disorder that significantly impacts the quality of life of affected individuals. Characterized by erythematous, scaly plaques, the condition varies widely in severity and clinical presentation. While psoriasis is a global health concern, its prevalence and clinical patterns differ based on genetic, environmental, and socio-economic factors.[1-4] In Bangladesh, where tropical climatic conditions and limited dermatological awareness prevail, understanding the burden of psoriasis is crucial for effective management and policy-making. Epidemiological studies on psoriasis in Bangladesh remain scarce, leading to a gap in knowledge regarding its true prevalence and clinical variations within the population. Factors such as genetic predisposition, urbanization, lifestyle changes, and

environmental triggers play significant roles in disease manifestation. Additionally, access to specialized dermatological care remains limited in rural areas, often leading to delayed diagnosis and treatment. The clinical presentation of psoriasis exhibits diversity, with chronic plaque psoriasis being the most common subtype. Other forms, including guttate, pustular, erythrodermic, and inverse psoriasis, are also observed. The disease can affect different body sites, with scalp, elbows, knees, and nails being frequently involved. Moreover, psoriasis is often associated with systemic comorbidities, such as psoriatic arthritis, metabolic syndrome, and cardiovascular diseases, further complicating disease management.[5-7] Understanding the prevalence and clinical patterns of psoriasis in Bangladesh is essential for improving healthcare strategies. Reliable epidemiological data can aid in resource allocation, awareness campaigns, and the development of targeted therapeutic approaches. Additionally, cultural and traditional beliefs surrounding skin diseases in the region can influence patients' treatment-seeking behavior, necessitating educational interventions.

OBJECTIVE

This study aims to explore the prevalence and clinical patterns of psoriasis in Bangladesh, shedding light on its burden and impact on affected individuals.

METHODOLOGY

This observational study was conducted at the department of dermatology and venereology, Jalalabad Ragib Rabeya Medical College Hospital, Sylhet, Bangladesh, from July 2022 to July 2023. The study included all dermatology patients presenting with clinical features of psoriasis. Most cases were diagnosed clinically, while histopathological examination of skin biopsy was performed for confirmation in doubtful cases. Informed written consent was obtained from all participants before inclusion in the study. A structured proforma was used to collect detailed demographic and clinical data, including patient history, clinical presentations, precipitating factors, and associated findings. A thorough physical examination and assessment of psoriatic lesions were carried out for each patient. The severity of psoriasis was classified based on body surface area (BSA) involvement. Patients with BSA <5% were categorized as having mild psoriasis, 5–10% as moderate, and >10% as severe. Data analysis was performed using SPSS version 16, and statistical significance was considered at a p-value of <0.05.

RESULTS

Table 1 presents the age at presentation of psoriasis among patients, indicating that the highest percentage of cases was observed in the 40 to 49 age group, comprising 19.35%. This was followed by the 30 to 39 age group at 16.13% and the 20 to 29 age group at 14.5%. The incidence was slightly lower in the 50 to 59 age group, also at 14.5%, while the 0 to 9 age group accounted for 12.9%. The 10 to 19 age group had 9.67% of cases, and those aged over 60 also represented 12.9% of the total cases.

Table 1: Age at Presentation of Psoriasis

Age (years)	Percentage (%)
0 – 9	12.9
10 – 19	9.67
20 – 29	14.5
30 – 39	16.13
40 – 49	19.35
50 – 59	14.5
>60	12.9

Table 2 illustrates the age at onset of psoriasis among patients, revealing that the highest percentage of cases occurred between the ages of 30 and 39, accounting for 22.58%. This was followed by the 0 to 9 age group, which represented 17.74%, and the 20 to 29 age group at 16.13%. The incidence decreased in older age brackets, with 14.51% of cases in the 40 to 49 range, 12.90% in the 10 to 19 and 50 to 59 groups, and only 3.22% of patients diagnosed after the age of 60.

Table 2: Age at Onset of Psoriasis

Age (years)	Percentage (%)
0 – 9	17.74
10 – 19	12.9
20 – 29	16.13
30 – 39	22.58
40 – 49	14.51
50 – 59	12.9
>60	3.22

Scaling and moderate pruritus were the most frequently reported symptoms, observed in 47 patients (77.42%), followed by arthralgia in 11 patients (17.7%). The most common predisposing factors for psoriasis included physical and emotional stress, cold weather, trauma, medications, and herbal remedies.

Table 3: Predisposing factors in psoriasis patients

Factors	Frequency in %
Stress	17.74
Trauma	14.52
Cold weather	14.52
Drugs	12.9
Infections	8.06
Smoking	6.45
Pregnancy	3.22
Menstrual period	1.61
Unknown	20.97

Plaque psoriasis was the most prevalent type, identified in 42 patients (67.74%), followed by scalp psoriasis in 30 patients (48.38%), nail psoriasis in 28 patients (45.16%), guttate psoriasis in 12 patients (19.4%), and erythrodermic psoriasis in 4 patients (6.66%).

Table 4: Type of Psoriasis

Type of Psoriasis	Percentage (%)
Plaque Psoriasis	67.74%
Scalp Psoriasis	48.38%
Nail Psoriasis	45.16%
Guttate Psoriasis	19.40%
Erythrodermic Psoriasis	6.66%

*Multiple responses were noted.

DISCUSSION

In this study, we investigated the age at presentation and onset of psoriasis, alongside the prevalent symptoms and predisposing factors among patients. Our findings indicated that the highest percentage of cases at presentation occurred in the 40 to 49 age group (19.35%), while the onset of psoriasis peaked between the ages of 30 and 39 (22.58%). These age distributions are consistent with several previous studies that have reported similar trends, suggesting that psoriasis frequently presents in middle adulthood, which could be attributed to the cumulative effects of environmental and genetic factors over time.[8-9] Interestingly, while our study found a significant number of patients experiencing psoriasis onset in early childhood (17.74% in the 0-9 age group), other studies have reported a lower incidence in this age bracket. For instance, a study indicated that only 10% of their subjects experienced onset before age 10. This disparity could be due to variations in sample size, demographic factors, or differing

definitions of psoriasis in various populations.[10] Additionally, our results indicate that the incidence decreases in older age groups, aligning with some studies that suggest that psoriasis prevalence diminishes after age 60, potentially due to changes in immune function or skin biology.[11] Regarding symptoms, scaling and moderate pruritus was reported as the most common symptom in our study (77.42%), followed by arthralgia in 17.7%. These findings resonate with other research that highlights scaling and moderate pruritus as a predominant complaint among psoriasis patients, as seen in a study where approximately 75% of patients reported itchiness as a major symptom.[12] However, our findings also suggest a relatively lower prevalence of arthralgia compared to other studies, which have documented higher rates of joint pain associated with psoriasis, indicating a possible underreporting or a variation in how symptoms are perceived by different patient populations.[13] In addition to age and symptoms, we explored the predisposing factors linked to psoriasis. Our study identified physical and emotional stress, cold weather, trauma, medications, and herbal remedies as common triggers. This aligns with the findings of a meta-analysis which highlighted stress and trauma as significant exacerbating factors for psoriasis.[14] However, the prevalence of specific triggers varied across studies, with some identifying other factors such as smoking and obesity as more prominent. The discrepancies could reflect cultural differences in lifestyle, healthcare access, and environmental factors influencing psoriasis development. Finally, regarding the types of psoriasis, our study found that plaque psoriasis was the most prevalent, affecting 67.74% of patients, consistent with the general understanding of psoriasis types. Other studies have reported similar trends, with plaque psoriasis being the most commonly diagnosed form due to its characteristic lesions and visibility.[15-22] However, the lower prevalence of erythrodermic psoriasis (6.66%) in our study compared to other research could indicate a variation in disease severity among the patient population or differences in diagnostic criteria.[9] Overall, while our findings are generally consistent with existing literature, they also highlight the need for further research to explore the underlying reasons for variations in age of onset, symptom reporting, and associated risk factors in psoriasis patients.

CONCLUSION

In our study highlights the significant age-related patterns in the presentation and onset of psoriasis, with a notable prevalence observed in the 40 to 49 age group at presentation and the 30 to 39 age group at onset. The findings underscore scaling and moderate pruritus as the most frequently reported symptom, with physical and emotional stress identified as key predisposing factors. Our results align with existing literature, affirming the commonality of plaque psoriasis as the predominant type. However, variations in symptom prevalence and triggering factors suggest the need for further investigation to better understand the complexities of psoriasis across different populations. Overall, these insights contribute to a more comprehensive understanding of psoriasis, aiding in more targeted management and treatment strategies.

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