

Prevalence, Clinical Pattern and Presentations of Psoriasis in A Tertiary Care Hospital of Bangladesh

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Abstract

Background:

To find out different presentations of Psoriasis in Bangladesh. **Material and Methods:** This is a cross sectional study of all dermatology patients with features of psoriasis who attended the dermatology outpatient clinic of the hospital between July 2016 and June 2017. Data was collected on a perform questionnaire. Age, gender and clinical presentations were recorded and analyzed using SPSS version 16. **Results:** Psoriasis was found in 1.13% (60/5505) of the study population. There was a male preponderance with a male to female ratio of 1.34:1. The majority of patients seen were in the fourth decade of life. Stress, alcohol, and drugs were the most reported predisposing factors to psoriasis. All types of psoriasis were found, and plaque psoriasis was the most common. **Conclusion:** Psoriasis is a one of the common skin diseases with wide range of clinical variation and predisposing factors. The current trend in the management of psoriasis is focused on treating the inflammatory process as well as managing the modifiable environmental triggers.

Key Words: Psoriasis, clinical presentation, Plaque psoriasis.

Introduction: Psoriasis (Greek. Psora, the itch)¹ is a common, chronic, relapsing, papulosquamous dermatitis, characterized by an erythematous papules or plaques covered by silvery scales.² Psoriasis has been estimated to affect 1–3% of the world's population but is noted to be rare in the Africans and North American Indians. It is more common in women and has two peaks of onset: In adolescents and young adults (16–22 years); and in older persons (57–60 years)³. Exact etiopathogenesis of Psoriasis is unknown. It is currently thought to result from genetically determined immune dysregulation (innate and adaptive immunity) resulting in production of large amount of cytokines such as tumor necrosis factor- α , interferon- γ , IL-12 and recently implicated IL-17 and IL-23.⁴ Subsequently, there is resultant epidermal proliferation with loss of differentiation; dilatation and proliferation of the dermal blood

vessels; and accumulation of inflammatory cells such as neutrophils and T-lymphocytes.^{4,5} The immune dysregulation is thought to be stimulated by an undetermined antigen, provoked by environmental factors such as trauma, infections, stress, drugs, sunlight, and metabolic derangement. Several genes have been associated with psoriasis; however, only PSORS1 is well-characterized and confirmed in 30–50% of patients^{5,6}.

Clinical features of psoriasis vary in morphology, extent of disease, duration, periodicity of flares, and response to therapy. The most common morphology is erythematous, indurated skin plaques, and coalescing papules covered with silvery white scales. The different types of Psoriasis are Plaque Psoriasis, Guttate Psoriasis, Flexural (invers psoriasis), Erythrodermic psoriasis, Pustular psoriasis, Palmoplantar

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pustulosi (Acrodermatitis continua of Hallopeau), Psoriatic arthritis⁷. Diagnosis of psoriasis is based on clinical appearance of skin lesion but biopsy is necessary to distinguish psoriasis from other conditions with similar appearances such as lichen planus, lichen simplex chronicus, tinea corporis and seborrheic dermatitis.

This study aimed to document the clinical characteristics, precipitating factors and associated features of psoriasis in patients seen at the dermatology outpatients' department of tertiary hospital of Bangladesh.

MATERIALS AND METHODS

This is an observational study of all dermatology patients with features of psoriasis who attended the dermatology outpatient department of Tairunnessa medical college hospital between July 2016 and Jun 2017. Most of the cases were diagnosed by clinically and some doubtful cases confirmed by histopathological examination of skin biopsy. A written consent is taken from all patients. Detailed clinical history, thorough physical examination and examination of lesions of each and every case were carried out as per the proforma. Which contains demographic data, clinical presentations, precipitating factors and associated findings in individuals with features of psoriasis. Severity of disease was assessed as mild, moderate and severe according to body surface area (BSA) involvement, <5% was labeled as mild; 5-10% moderate and >10% was severe⁸. SPSS version 16 was used to analyze the data. P values <0.05 were considered statistically significant.

RESULTS

The diagnosis of psoriasis was made in 62 (1.12%) of the 5507 patients seen during the study period. There was a slight male preponderance; 33 patients were male (53.3%), while 29 patients female (46.7%), giving a male to female ratio of 1.14:1. Psoriasis was seen in all age groups and the highest frequency of patients presented in the fifth decade of life [Table 1]. The mean age of presentation was 36.2 ± 18.8 years. The youngest patient was a 12-week-old baby who presented with a 10 weeks history of plaque and scalp psoriasis. Auspitz sign was documented in the plaque psoriasis. The oldest patient was 72 years old and presented with pruritic guttate, plaque and scalp psoriasis. The peak age of onset was in the first and fourth decades of life. The age of onset varied

between 2 weeks and 72 years with the mean age of onset being 30.29 ± 18.5 years [Table 2]. A positive family history of psoriasis (first-degree relatives) was documented in 4 patients (6.45%). Pruritus was the most common presenting symptom found in 47 patients (77.42%), followed by arthralgia in 11 (17.7%) of patients. The common predisposing factors to psoriasis were physical and emotional stress, cold weather, trauma, drugs, and herbs [Table 3]. Drugs noted to predispose patients to psoriasis were beta-blockers (3), aspirin (1), steroids (2). Plaque psoriasis was the most common presentation found in 42 patients (67.74%), followed by scalp psoriasis in 30 patients (48.38%), nail psoriasis 28 (45.16%), guttate psoriasis in 12 patients (19.4%) and erythrodermic psoriasis in 4 patients (6.66%). Other types found included pustular, inverse and psoriatic arthritis (Table 4).

Table 1: Age at presentation of psoriasis.

Age (years)	Frequency of patients	Percentages
0 — 9	8	12.9
10 — 19	6	9.67
20 — 29	9	14.5
30 — 39	10	16.13
40 — 49	12	19.35
50 — 59	9	14.5
>60	8	12.9

Table -2: Age at onset of psoriasis

Age (years)	Frequency of Patients	Percentages
0 - 9	11	17.74
10 - 19	8	12.9
20 - 29	10	16.13
30 39	14	22.58
40 - 49	9	14.51
50 59	8	12.9
>60	2	3.22
Total patient	62	

Table-3: Predisposing factors in psoriasis patients

Factors	Number of patients	Frequency in %
Stress	11	17.74
Trauma	9	14.52
Cold weather	9	14.52
Drugs	8	12.9
Infections	5	8.06
Smoking	4	6.45
Pregnancy	2	3.22
Menstrual period	1	1.61
Unknown	13	20.97

Table -4: Frequency of different types of psoriasis

Types of psoriasis	Frequency of patients	Percentages
Plaque	42, M=22	67.74, M=36.48%
	F=20	F =32.26%
Scalp	30 M=12	48.38, M=19.35%
	F =18	F =29.02%
Nail	28 M=13	45.16, M=20.97%
	F=15	F=24.19%
Guttate	12, M=7	19.4, M=11.29%
	F=5	F=8.06%
Erythrodermic	4, M=3	6.66, M=4.83%
	F=1	F=1.61%
Inverse	4, M=2	6.66, M=3.23%
	F=2	F= 3.23%
Pustular	3, M=2	4.84, M=3.23%
	F=1	F=1.61%
Arthritis	3, M=2	4.84, M=3.23%
	F=1	F=1.61%

M=male, F=female

Koebner's phenomenon was noted in 19 patients (30.6%) and the Auspitz sign was elicited in 40 patients (64.5%). Nail changes were found in 40(64.5%) patients, most commonly pitting of the nail plate was found in 25 (40.3%) patient .The severity of psoriasis was documented using the BSA. 10 (16.12%) of these had mild disease, 28 (45.16%) had moderate psoriasis whereas 24 (38.7%) had severe psoriasis. All patients with psoriasis were managed as outpatients and none of the patients with erythrodermic psoriasis had features or complications that warranted emergency management.

DISCUSSION

The exact prevalence of psoriasis in Bangladesh is not known. There is a growing number of population-based studies providing worldwide prevalence estimates of psoriasis. Prevalence of psoriasis varies in different parts of the world. According to published reports, prevalence in different populations varies from 0.4% to 11.8%.^{8,9} For most of the data given, the range extends from around 0.5% to close to 2.5%. In our study it is 1.12% among 5507 dermatology patient. In an study of India Sunil et al shows prevalence of psoriasis is 0.44% to 2.8% . Studies from the UK, US, and other parts of the¹⁰ world documented a female preponderance; while this study showed a male predominance similar to findings in India and by Obasi in Northern Nigeria.^{11,12}

Psoriasis was seen in all age groups, with the highest number of patients presenting in the fourth decade of life, with mean age of presentation was 36.2 ± 18.8 years, a finding similar to that in Dogra et al.¹³ There were two peaks in the age of onset: First and fourth decades of life. The frequency of psoriasis was lower in the older age group in this study, similar to documentation from the UK.¹⁴

In this study 6.45% patient have family history of psoriasis among first degree relatives which is consistent with a previous study of childhood psoriasis in Bangladesh by Bhuyan et al¹⁵ . More than one-fifth of psoriasis patients seen in this study (21.8%) presented in the first two decades of. This finding is similar to previous studies which documented 25–45% of individuals with psoriasis having onset in childhood and adolescents.¹⁶ The itching was the most common symptom in this study accounting for about three-quarters of the symptoms (77.42%) similar to a previous study.¹⁷ While itching in psoriasis was found to be less significant than in atopic dermatitis, it correlated with severity of psoriasis as evidenced by increased PASI score; impairment of quality of life; the degree of stigmatization and depressive symptoms. Apart from the genetic factors, a broad spectrum of environmental factors has been documented to definitely modulate features, course and severity of psoriasis. In this study shows common aggravating factors of psoriasis are stress, trauma, cold weather, drugs, infection, smoking similar study was shown by Ayanlowo O. et al.¹⁸ So Lifestyle modification such as abstaining from smoking, stress management, regular exercises and healthy habits are advocated to be paramount in the holistic management of psoriasis, resulting in reduction of recurrences, and ameliorating severity and clinical presentation of psoriasis.

CONCLUSION

Psoriasis is a common dermatological disorder in Bangladesh with prevalence, epidemiological and clinical characteristics are near about similar to the presentation of disease in world. There is paucity of data related to psoriasis patients in Bangladesh. More research and detailed prospective studies need to be done to delineate the natural course of the disease which varies in different individuals and also according to the clinical pattern of the disease. While genetic factors are non modifiable, environmental factors which play an additive role in the pathogenesis of psoriasis, are usually modifiable. Knowledge of the environmental triggers and their avoidance is likely to contribute to cure or reduction of recurrences or exacerbation.

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