Psoriasis Patients with Human Immunodeficiency Virus infection: Data from Malaysian Psoriasis Registry

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INTRODUCTION

Psoriasis is a chronic T-cell mediated autoimmune skin disorder. It can be a presenting feature of human immunodeficiency virus (HIV) infection and a clue to the stage of immune dysfunction of the patient.[1] Psoriasis in HIV is often more severe and refractory to treatment.[2]

OBJECTIVE

Our objective was to determine the frequency of HIV infection among patients with psoriasis and to describe the clinical features, treatment and quality of life in this population.

METHODS

This is a retrospective cross-sectional study of psoriasis patients with HIV infection who were notified to the Malaysian Psoriasis Registry (MPR) from January 2007 to December 2018.

RESULTS

- There were 105 patients (0.5%) reported to be infected with HIV from a total 21,758 psoriasis patients registered to MPR.
  - Six had co-infection with hepatitis B or hepatitis C.
- Plaque psoriasis was the most frequent presentation (80.0%), followed by guttate (7.6%) and erythrodermic psoriasis (2.9%).
- Compared to those without HIV infection (Table 1&2), psoriasis patients with HIV infection had more
  - **Male gender (p<0.001)**
  - **Face and neck involvement (p=0.003)**
  - **Nail disease (p=0.029)**
  - **Severe disease, BSA >10% (p<0.001)**

Table 1: Demographic Distribution of MPR Patients

Demographic Characteristic		HIV n=105 (%)	Non-HIV n=21653
Age (years)	Mean (SD)	40.90 (10.85)	42.25 (17.56)
	Range	21-82	1-97
Gender	Male	90 (85.7)	11977 (55.3)
	Female	15 (0.2)	9676 (44.7)
Ethnicity	Malay	41 (39.0)	11778 (54.4)
	Chinese	40 (38.1)	4117 (19.0)
	Indian	13 (12.4)	3535 (16.4)
	Others	11 (10.5)	2223 (10.2)
Family history of psoriasis		11 (10.5)	5022 (23.1)

Table 2: Clinical Characteristics of MPR Patients

Clinical Characteristics		HIV n=105 (%)	Non-HIV n=21653 (%)
Type of psoriasis	Plaque	84 (84.8)	18502 (85.4)
	Erythrodermic	3 (1.6)	372 (1.7)
	Inverse	0	101 (0.5)
	Guttate	8 (7.6)	727 (3.4)
	Generalised pustular	0	84 (0.4)
	Localised pustular	0	52 (0.2)
	Palmoplantar non pustular	1 (1.0)	85 (0.4)
	Scalp	1(1.0)	253 (1.1)
	Not available	8 (7.6)	1702 (7.8)
Body mass index (BMI) (kg/m^2)	<18.5	20.5 (21.7)	1364 (6.3)
	18.5-22.9	37 (40.2)	4138 (19.1)
	23-24.9	15 (16.3)	2734 (12.6)
	≥25	20 (21.7)	10633 (49.1)
	Not available	13 (12.4)	2784 (12.9)
Body surface area (BSA) (%)	<5	35 (42.2)	7190 (33.2)
	5-10	15 (18.1)	4638 (21.4)
	10-90	29 (34.9)	3190 (14.7)
	>90	4 (4.8)	303 (1.4)
	Not available	22 (20.9)	6332 (29.2)
Face and neck involvement		66 (65.3)	10232 (50.6)
Nail disease		71 (67.6)	11570 (53.2)
Psoriasis arthropathy		9 (8.6)	2709 (12.5)
Dermatology Life Quality Index (DLQI) Mean (SD)		10.98 (7.07)	8.68 (6.60)
Dermatology Life Quality Index (DLQI) ≥10		16 (28.6)	2767 (25.5)

- Patients without HIV infection had higher proportions of
  - Obesity (p<0.001)
  - Family history of psoriasis (p<0.002)
- Our HIV cohort had higher rate of erythroderma but it was not statistically significant (p=0.232).
- The mean DLQI among our HIV cohort was significantly higher than the non HIV psoriasis patients (p=0.029).
  - The domains that were greatly affected were physical symptoms and feeling, daily activities and leisure.

Table 3: Treatment of MPR Patients

Treatment Option	HIV n=105 (%)	Non-HIV n=21653 (%)
Topical	95 (90.5)	19563 (89.9)
Phototherapy	1 (1.0)	513 (2.4)
Systemic therapy	11 (10.5)	3453 (15.9)
Methotrexate	2 (1.9)	2508 (11.5)
Acitretin	9 (8.6)	633 (2.9)
Sulfasalazine	0	189 (0.9)
Cyclosporin	0	150 (0.7)
Hydroxyurea	0	24 (0.1)
Biologic	0	104 (0.5)
Systemic corticosteroid	0	145 (0.7)
Others	0	89 (0.4)

DISCUSSION

- The prevalence of psoriasis in HIV patients ranged from 1-25%[1,2], higher rates reported in Singapore and Thailand[3,4].
- Our cohort demonstrated a lower frequency of HIV infection among psoriasis patients (0.5%) compared to Thailand (1.8%)[5]. This is possibly due to voluntary notification to MPR and non-mandatory HIV testing of psoriasis patients.
- Guttate, inverse and erythrodermic psoriasis occur with the highest frequency in HIV infected psoriasis patients[2,6]. However, this was not evident in our cohort.
  - Interestingly, we observed more of face and neck involvement in the HIV cohort.
- Our data showed that very few HIV cohort received systemic therapy and phototherapy despite having more severe disease compared to non-HIV cohort.
  - Dermatologists in Malaysia should consider more aggressive management of psoriasis in HIV patients.
  - Menon et al had recommended antiretroviral therapy as the first line treatment for HIV-infected psoriasis patients, and phototherapy for patients with moderate to severe HIV-associated psoriasis without erythroderma. Oral retinoid is recommended as the second line therapy[2].
  - Biologic agents are safe in HIV infected psoriasis patients especially for those on Highly Active Anti Retroviral Therapy (HAART). TNF-α blockers or IL 12/23 inhibitors may be considered in patients with stable HIV infection and severe psoriasis[7].

CONCLUSION

The frequency of HIV among psoriasis patients in the MPR was lower compared to other study[5]. Most of the HIV-infected psoriasis patients in our cohort had plaque psoriasis. They had more nail, face and neck involvement and had more severe disease which significantly affected the patients' quality of life. Treatment given to HIV psoriasis patients were less aggressive compared to non-HIV psoriasis patients.

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TAKE HOME MESSAGE

There should be strong suspicion of HIV infection when psoriasis patients present with multiple types of morphology and/or are recalcitrant to treatment.