Poster No. 14

Clinical Profile, Treatment and Health-Related Quality of Life of Non-Pustular Palmoplantar Psoriasis Patients in Malaysia

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Introduction

Palmoplantar psoriasis is a variant of psoriasis that affects the palms and soles. It is a therapeutically challenging condition that can significantly impact patients' quality of life.[1] In this study, we aim to determine the frequency of non-pustular palmoplantar psoriasis (NPPP) among psoriasis patients and describe the clinical features, treatment and impact on health-related quality of life (HRQoL).

Methodology

This was a retrospective cross-sectional study utilizing the database of the Malaysian Psoriasis Registry (MPR). All psoriasis patients registered from 1.1.2007 till 31.12.2018 were included. Patients' data was obtained from the MPR at first notification. The demographic distribution, clinical characteristics, management and DLQI scores were collected and analysed. The chi squared test was used to identify potential associations between demographic factors, disease characteristics and severity, comorbidities and treatment. The independent t-test was used to compare continuous variables for parametric data.

Results

- From a total of 21,735 psoriasis patients registered to the MPR, 87 (0.4%) patients had NPPP.
- The male to female ratio was 1:1.

Table 1: Demographic Distribution and Clinical Characteristics of MPR patients

Demographic Characteristics		Palmoplantar psoriasis N=87		Other psoriasis subtypes N=20383		*p-value*
Age of onset for psoriasis (years)	Mean ±SD	40.54±19.55		33.33±16.9		0.001
	Min, Max	4,85		1,88		
		n	%	n	%	
Gender	Male	43	49.4	11335	55.6	0.25
	Female	44	50.6	9048	44.4	
Ethnicity		N=87		N=20377		
	Malay	40	46	11022	54.1	
	Chinese	20	23	3877	19	
	Indian	16	18.4	3362	16.5	
	Others	11	12.6	2116	10.4	
Family history of psoriasis		N=86		N=20044		0.85
		18	20.9	4596	22.9	
Comorbidities	Dyslipidaemia	22 (n=87)	25.3	3252 (n=19677)	16.5	0.03
	Hypertension	25 (n=87)	28.7	4745 (n=19894)	23.9	0.29
	Diabetes mellitus	20 (n=87)	23	3161 (n=19867)	15.9	0.07
	Ischemic heart disease	6 (n=87)	6.9	970(n=19854)	4.9	0.39
	Cerebrovascular disease	1 (n=87)	1.1	291 (n=19848)	1.5	0.81
	HIV	1 (n=87)	1.1	97 (n=20383)	0.5	0.36
Clinical Characteristics		N=83		N=18205		
BMI (kg/m2)	<23	27	32.5	5345	29.4	0.50
	≥23	56	67.5	12860	70.6	
BSA		N=75		N=15915		
	<5	58	77.3	7088	44.5	
	05-Oct	15	20	5003	31.4	
	Nov-90	2	2.7	3403	21.4	
	>90	0	0	421	2.6	
Face and neck involvement		6 (n=76)	7.9	10112(n=19543)	51.7	<0.001
Nail Involvement		50 (n=87)	57.5	11366 (n= 20151)	81.6	0.84
Scalp		16 (n=79)	20.3	16117 (n=19756)	56.4	<0.001
Psoriatic arthropathy		4 (n=86)	4.7	2634 (n=20141)	13.1	0.02
DLQI >10		28 (n=77)	36.4	7494 (n=18581)	40.3	0.48
Mean DLQI		9.06±6.39		9.62±6.75		0.48
Severe psoriasis (BSA >10 and/or DLQI >10)		23 (n=66)	34.9	7331 (n=14622)	50.1	0.01

BMI = Body Mass Index; BSA = Body Surface Area; DLQI = Dermatology Life Quality Index; HIV= Human immunodeficiency virus; SD = Standard Deviation;

Table 2 : Types of treatment for MPR patients

Treatment	Palmoplantar psoriasis N = 87		Other psoriasis subtypes N=19972		*p-value*
	n	%	n	%	
Topical	85	97.7	18960	94.9	0.24
Phototherapy	2 (n=86)	2.3	522 (n=19670)	2.7	0.85
Systemic therapy	13	14.9	3055(n=19859)	15.4	0.92
Acitretin	5	5.8	544	2.7	0.08
Methotrexate	7	8	2179	11	0.38
Systemic corticosteroids	1	1.1	173	0.9	0.78
Cyclosporin	0	0	136	0.7	0.44
Hydroxyurea	0	0	23	0.1	0.75
Biologics	0	0	78	0.4	0.56

Discussion

- The prevalence of NPPP is 3% to 4% of psoriasis cases.[2] Our study demonstrated a much smaller cohort which could likely be due to misdiagnosis as a multitude of conditions can resemble NPPP.
- The older age of onset for NPPP patients is similar to the findings of Chung et al.[3] A possible reason behind this could be the late recognition of this subtype.
- Greenberg et al found dyslipidaemia occuring frequently in NPPP patients (32.5% vs 26.1%, p=0.17) as in our study.[4] Therefore, screening for comorbidities is as relevant as for other psoriasis subtypes.
- Wilson et al. found that the risk of psoriatic arthropathy (PsA) is higher in those with scalp, intergluteal, or perianal lesions.[5] In agreement to this, PsA was found to be less frequent in our cohort.
- In our study, we found similar DLQI scores for both NPPP and other psoriasis subtypes.
  - Chung et al found NPPP was associated with substantial impairment of HRQoL, specifically when compared with moderate to severe plaque psoriasis.[3]
  - Greenberg et al also found a strong association between NPPP and mood disorders.[4]
  - This clearly indicates that patients with NPPP need effective treatment as the disease has a significant impact on the physical, psychological and social wellbeing of the patient.
- Clinicians using BSA, Physician's Global Assessment (PGA) and Psoriasis Area Severity Index (PASI) as disease severity measures when determining treatment for NPPP patients would perceive them as having mild or limited disease.[2] This resulted in non treatment or under treatment as many eligibility criteria for systemic or biologic treatment would disqualify them.[1]
  - The Psoriasis Severity Reclassification Project by the International Psoriasis Council have recommended that patients with psoriasis lesions on special areas (face, palms, soles, genitalia, scalp, or nails) are candidates for systemic therapy.[8]
  - Clinicians should employ the Palmoplantar Psoriasis Area and Severity Index (PPPASI) as a disease severity measure for better accuracy.
- A study by Spuls et al reported that only 27.4% of NPPP patients showed improvement with topical agents, whereas the remaining patients required systemic treatments.[6] Another study demonstrated a high percentage of improvement (83%), with aciretin being used as a first line therapy for NPPP.[7] This, however, was not reflected in our data clearly showing a gap in treatment. Possible reasons for this may include clinicians being cautious with the use of acitretin in view of dyslipidaemia being high amongst these patients.
- None of the NPPP patients in our cohort received biologic treatment.
  - The high cost of biologics is likely the main contributing factor followed by clinicians not recognizing NPPP as a severe debilitating disease.
  - A systematic review by Sanchez et al, found results from RCTs (level 1 evidence) that suggest adalimumab, guselkumab, ixekizumab and secukinumab are effective treatment options for NPPP.[9] Thus, these medications may be considered in recalcitrant cases who have failed the conventional systemic treatment.
- Limitations: The MPR is based on voluntary reporting thus the number of patients included in our cohort may not reflect the actual number of NPPP patients in Malaysia. Moreover, the true impact of the disease may not have been reflected as PPPASI was not used to assess NPPP patients.
- We recommend that clinicians be more intuitive towards NPPP patients, especially in terms of assessing severity of disease, co-morbidities, quality of life and deciding on treatment.
- A future prospective study using PPPASI as a severity measure is warranted to capture all dimensions of HRQoL affected by NPPP patients.

Conclusion

Overall, 0.4% of psoriasis patients in the MPR had NPPP. This cohort presented at an older age, had a higher rate of dyslipidemia, were less likely to have joint disease and infrequently received systemic treatment.

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