Characteristics of psoriasis patients with depression in Malaysia

Jean Nie Lim[1], Min Moon Tang[2], Suganthy Robinson[3], Malaysian Psoriasis Registry Working Group

[1]Department of Medicine, Hospital Miri
[2]Department of Dermatology, Hospital Umum Sarawak
[3]Department of Dermatology, Hospital Kuala Lumpur

HOSPITAL MIRI

Introduction

Psoriasis patients suffer from mood disorders. We aim to describe the characteristics of psoriasis patients with depression in Malaysia.

Materials and Method

This is a cross-sectional study using data from the Malaysian Psoriasis Registry (MPR) between November 2019 till September 2022. The registry recorded patients' demography, medical history, clinical findings, treatment received within 6 months, and dermatology life quality index (DLQI) scores. Depression was reported if the patient had been diagnosed by a psychiatrist.

Results

- Of a total of 7,748 psoriasis patients registered to the MPR during the study period, 93 patients (1.2%) were suffering from depression.
- The male-to-female ratio of psoriasis patients with and without depression were 1:1.2 and 1:0.9 respectively.
- Individuals experiencing depression reported a higher occurrence of pain due to psoriasis compared to those without depression (22.1% vs 13.4%, *p=0.02*).
- Psoriasis patients with depression demonstrated significantly higher rates of various medical conditions such as dyslipidemia (38.7% vs 21%, *p<0.001*), hypertension (40.9% vs 27%, *p<0.003*), diabetes (30.1% vs 17.7%, *p=0.002*), ischemic heart disease (9.7% vs 4.5%, *p=0.02*), human immunodeficiency virus (HIV) infection (4.3% vs 0.6%, *p<0.001*), non-alcoholic fatty liver disease (10.8% vs 3.1%, p<0.001), and inflammatory bowel disease (1.1% vs 0%, *p=0.01*), compared to psoriasis patients without depression.
- The usage of illicit drugs was significantly higher in psoriasis patients with depression compared to those without (2.2% vs 0.4%, *p=0.007*).
- A greater proportion of psoriasis patients with depression had a DLQI of more than 10 compared to those without (43.3% vs 36%, *p=0.15*).

Table 1: Demographic characteristics of study population (n = 7748)

Demographic Characteristic		Psoriasis with depression n= 93(%)	Psoriasis without depression n=7537 (%)	p-value
Age (years)	Mean (SD)	47.72±16.46	42.95±17.2	0.009
	Min, Max	15.04, 88.44	0.15, 89.02	
Gender	Male	43	4054	0.15
	Female	50	3483	
Ethnicity	Malay	50	4469	-
	Chinese	18	1268	
	Indian	16	1093	
	Others	9	707	
Family history of psoriasis		20 (21.5)	1869/7533 (24.8)	0.46
Presence of pregnancy		3 / 50 (6)	127/3350 (3.8)	0.07
Comorbidities	Dyslipidaemia	36 (38.7)	1580 (21.0)	<0.001
	Hypertension	38 (40.9)	2031(27.0)	0.003
	DM	28 (30.1)	1335 (17.7)	0.002
	IHD	9 (9.7)	341 (4.5)	0.02
	CVA	2 (2.2)	113 (1.5)	0.61
	HIV	4 (4.3)	43 (0.6)	<0.001
	Fatty liver	10 (10.8)	231 (3.1)	<0.001
	IBD	1 (1.1)	0	0.01
	Malignancy	0	110 (1.5)	0.24

SD- standard deviation, DM- diabetes mellitus, IHD – ischaemic heart disease, CVA – cerebrovascular disease, HIV – human immunodeficiency virus; IBD – inflammatory bowel disease

Table 2: Clinical characteristics of study population

Clinical Characteristic		Psoriasis with depression n=93 (%)	Psoriasis without depression n=7461 (%)	p-value
Body mass index (BMI) (kg/m2)	<18.5	5	454	
	18.5-22.9	9	1430	-
	23-24.9	13	1035	
	>25	63	4542	-
Body surface area (BSA) (%)		n=88	n=7297	-
	<5	35	2849	
	5-10	24	2611	
	11-30	20	1162	
	31-50	4	319	
	51-70	1	163	
	71-90	4	161	
	>90	0	32	
Face		24/91 (26.4)	1967/7355 (26.7)	0.94
Genital		6/92 (6.5)	322/7296 (4.4)	0.33
Tongue		0/91	4/7295	0.82
Eye		0/91	46/7298	0.45
Nail disease		61/91 (67.0)	4273/7505 (56.9)	0.05
Scalp		53/92 (57.6)	4158/7416 (56.1)	0.77
Psoriatic arthropathy		19/91 (20.9)	1371/7505 (18.3)	0.52
DLQI >10		39/90 (43.3)	2574/7144 (36.0)	0.15
BSA>10		29/88 (33)	1838/7303 (25.2)	0.10
Mean PASI		6.69±7.76	6.56±8.36	0.82
Mean BSA		13.19±19.72	11.95±17.75	0.52
PASI>10		18/73 (24.7)	992/5565 (17.8)	0.13
Duration of psoriasis at notification(yrs)		13.00 ±13.02	10.42 ± 10.26	0.06
Illicit drug use		2/93 (2.2)	27/7231 (0.4)	0.007
Pain from psoriatic lesions		19/86 (22.1)	914/6797 (13.4)	0.02
DLQI Domain		n=91	n=7143	
	Symptoms and feeling	2.71±1.76	2.62±1.64	0.61
	Daily activities	2.14±1.85	2.01±1.76	0.51
	Leisure	1.91±1.88	1.81±1.82	0.62
	Work and school	0.72±1.00	0.67±0.95	0.62
	Personal relationship	1.16±1.53	1.11±1.45	0.72
	Treatment	1.01±1.05	0.86±0.93	0.14

DLQI- dermatology life quality index; PASI – psoriasis area severity index; yrs - years

Table 3: Types of treatment for psoriasis in study population

Types of treatment	Psoriasis with depression n= 91(%)	Psoriasis without depression n= 7501(%)	p-value
Topical	82 (90.1)	6651 (88.7)	0.67
Phototherapy	3 (3.3)	208 (2.8)	0.76
Systemic therapy	35 (38.5)	2413 (32.2)	0.20
Acitretin	5 (5.5)	600 (8.0)	0.14
Methotrexate	29 (31.9)	1735 (23.1)	0.05
Systemic corticosteroids	0	8	0.69
Cyclosporin	1 (1.1)	154 (2.1)	0.38
Biologics	2 (2.2)	205 (2.7)	0.53

Discussion

➤ Psoriasis is a chronic inflammatory skin disorder that has been associated with a range of comorbidities, both physical and psychological.[1]
➤ The prevalence of depression among psoriasis patients was reported to be at up to 20%.[1]
  - Our study observed a depression prevalence of 1.2%.
  - These findings underscore the need for comprehensive care that acknowledges the psychological aspects of psoriasis.
➤ Psoriasis patients with depression were more likely to have comorbidities compared to their counterparts without depression.
  - This is in keeping with the study done in Taiwan.[2]
  - The higher prevalence of comorbidities among psoriasis patients with depression suggests a potential link between immune dysfunction and depressive states.
  - This aligns with emerging research that highlights the bidirectional relationship between the immune system and mental health.[1]
  - The intricate interactions between inflammation, cytokine production, and mood disorders warrant further investigation.
➤ Our study also uncovered a higher usage of illicit drugs among psoriasis patients with depression, suggesting a potential link between psychological distress and unhealthy coping mechanisms.
  - Substance use could further exacerbate both the physical and mental health challenges faced by individuals with psoriasis and depression.
➤ There were no significant differences in terms of disease severity and the DLQI score between psoriasis with and without depression in our cohort.
  - Clinical cutaneous severity of psoriasis was not the main factor in resulting depression in this group of patients.
  - DLQI only assessed the quality of life pertaining to skin symptoms and signs.
  - Specific tool such as Short Form of Depression Anxiety Stress Scales (DASS-21) should be used to measure the negative emotion.

Conclusion

The prevalence of depression among psoriasis in Malaysia was 1.2%. Psoriasis patients with depression were more likely to have comorbidities as well as HIV infection compared to their counterparts without depression. Our study emphasizes the link between physical and psychological health in psoriasis patients, indicating the importance of an integrated care model to address the disease's multifaceted impact.

Acknowledgement

References

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