



CO-MORBIDITIES AND RISK FACTORS IN ADULT PATIENTS WITH PSORIATIC ARTHRITIS IN MALAYSIA



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INTRODUCTION

Psoriatic arthritis (PsA) is an inflammatory arthritis associated with psoriasis. It is considered to be one of the spondyloarthritides and as such has both spinal and peripheral joint involvement as well as enthesitis and dactylitis. PsA patients have a higher prevalence of co-morbidities like diabetes mellitus, hypertension, hyperlipidaemia and obesity.

OBJECTIVE

The aim of this study is to determine the co-morbidities & risk factors in adult patients (aged >18 years) with PsA in Malaysia.

METHOD

Data was obtained from the Malaysian Psoriasis Registry.

RESULTS

A total of 15,794 adult patients were notified to the registry between July 2007 to December 2016. However, only 14,181 patients had complete data, and of these, 13.4% patients had PsA. 51.9% were females and 22.6% were Indian (Figure 1). The commonest type of arthropathy reported was oligo/monoarthropathy, which accounted for 37.9% of cases (Figure 2). PsA patients were found to have increased co-morbidities such as diabetes mellitus, hypertension, hyperlipidaemia and obesity ($p < 0.001$) (Table 1). 9 factors were found to be significantly ($p < 0.05$) associated in adult patients with PsA. These were older patients (age > 40 years), younger age of onset (<40 years), longer duration of disease (>5 years), female gender, Indian ethnicity, body surface area > 10%, total skin score ≥ 10 , presence of nail involvement and DLQI > 10 (Table 2). Patients with PsA also have reduced productivity as evidenced by increased in DLQI, hospital visits, days off work and hospital admissions (Table 3).

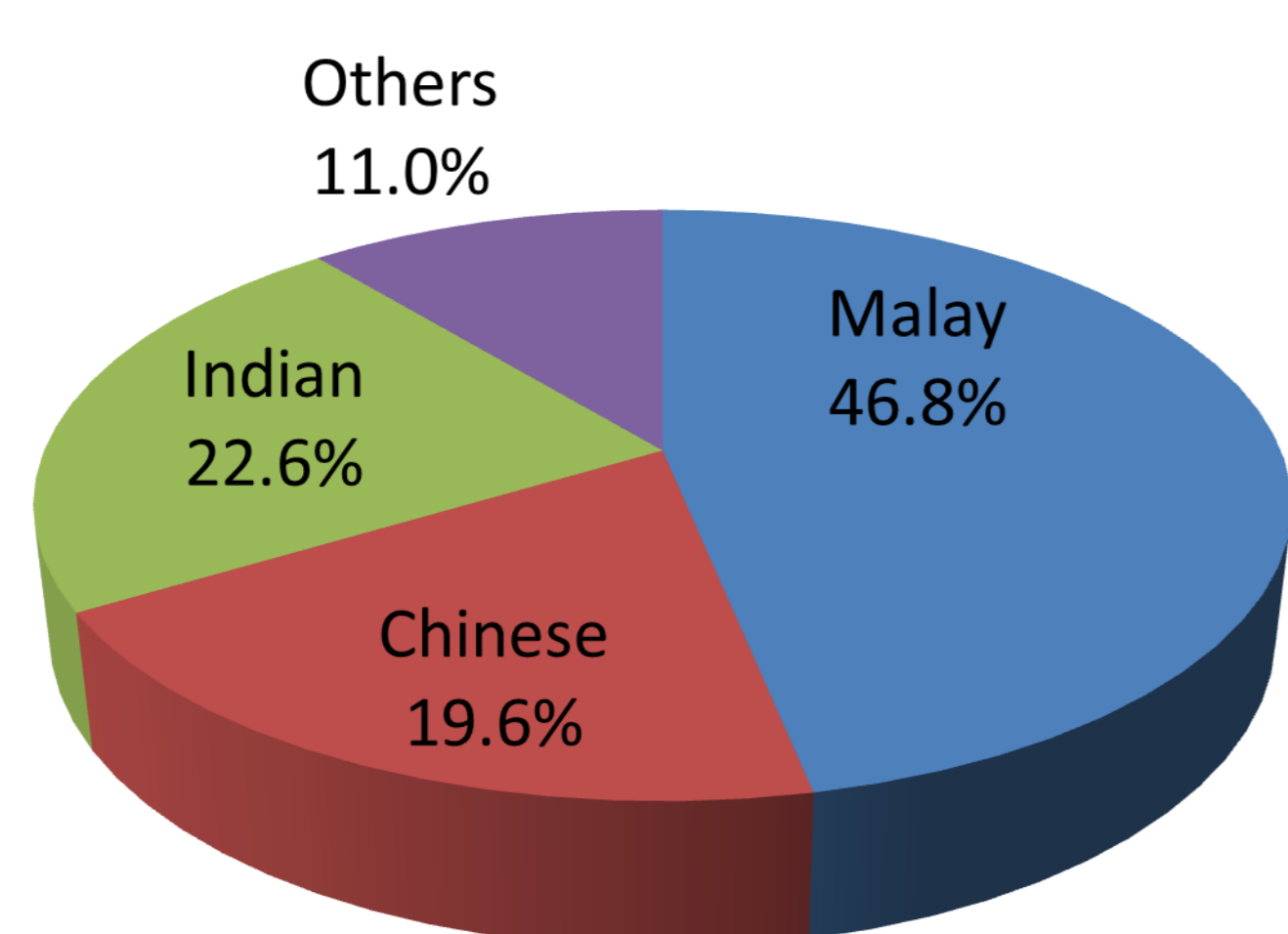


Figure 1 Ethnicity in patients with PsA

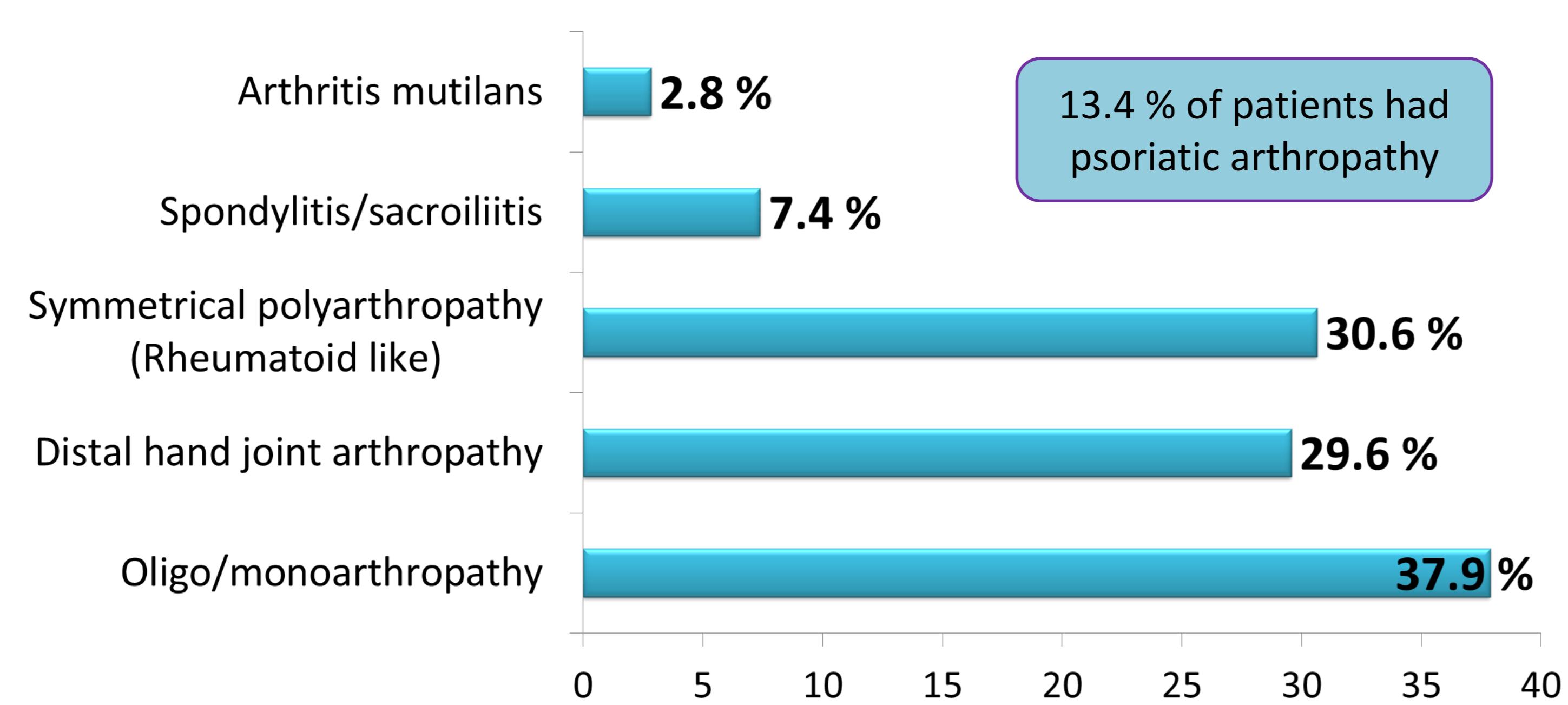


Figure 2 Types of psoriatic arthropathy

Table 1 Co-morbidities associated with psoriatic arthritis patients

Co-morbidities	Arthritis Present (n=1,905)		Arthritis Absent (n=11,967)		Simple Logistic Regression*		
	n	%	n	%	Crude OR	(95% CI)	P-value
Diabetes Mellitus	403	16.0	2,116	84.0	1.25	1.11, 1.40	<0.001
Hypertension	632	16.9	3,106	83.1	1.41	1.27, 1.57	<0.001
Hyperlipidaemia	492	18.7	2,146	81.3	1.60	1.43, 1.79	<0.001
Ischaemic heart disease	125	15.4	685	84.6	1.15	0.94, 1.40	0.168
Cerebrovascular disease	29	12.6	201	87.4	0.90	0.61, 1.33	0.590
BMI \geq 30 (obesity WHO)	529	16.0	2,777	84.0	1.27	1.14, 1.42	<0.001

*Result was based on available information

Table 2 Factors associated with psoriatic arthritis in adults patients

Variable	Arthritis Present (n=1,905)		Arthritis Absent (n=11,967)		Multiple Logistic Regression ^a		
	n	%	n	%	Adj. OR	(95% CI)	P-value
Age:							<0.001
17-40 years	612	10.7	5,122	89.3	1.00	(ref.)	
41-60 years	963	17.7	4,472	82.3	1.98	1.61, 2.45	<0.001
>60 years	330	12.2	2,373	87.8	1.62	1.20, 2.19	0.002
Age of onset:							
\leq 40 years (Type 1)	1,268	14.3	7,610	85.7	1.32	1.05, 1.64	0.015
>40 years (Type 2)	596	12.6	4,153	87.4	1.00	(ref.)	
Duration of disease:							
\leq 5 years	539	9.6	5,093	90.4	1.00	(ref.)	
>5 years	1,325	16.6	6,670	83.4	1.40	1.14, 1.72	<0.001
Gender:							
Male	917	11.7	6,927	88.3	1.00	(ref.)	
Female	988	16.4	5,040	83.6	1.90	1.61, 2.24	<0.001
Ethnicity:							
Indian	431	18.0	1,965	82.0	1.69	1.39, 2.06	<0.001
Non-Indian	1,474	12.8	9,997	87.2	1.00	(ref.)	
Obesity group (WHO):							NS
BMI <30	1,376	13.0	9,190	87.0			
BMI \geq 30	529	16.0	2,777	84.0			
Type of psoriasis:							NS
Erythrodermic	53	22.8	179	77.2			
Non-erythrodermic	1,741	13.4	11,219	86.6			
Body surface area:							
\leq 10%	904	12.2	6,484	87.8	1.00	(ref.)	
>10%	424	18.9	1,822	81.1	1.29	1.06, 1.57	0.011
Total skin score:							
<10	1,682	13.2	11,046	86.8	1.00	(ref.)	
\geq 10	178	19.9	717	80.1	1.90	1.40, 2.59	<0.001
Nail involvement:							
Absence	465	8.3	5,152	91.7	1.00	(ref.)	
Presence	1,405	17.2	6,754	82.8	2.19	1.81, 2.64	<0.001
DLQI:							
\leq 10	685	13.9	4,250	86.1	1.00	(ref.)	
>10	417	17.4	1,982	82.6	1.30	1.09, 1.55	0.004

*Result was based on available information.

Adj. OR = Adjusted odds ratio; ref. = Reference; NS = Not significant a Forward LR was applied.

Multicollinearity was checked and not found.

Hosmer-Lemeshow test (P=0.152), classification table (overall correctly classified percentage=85.5%) and area under the ROC curve (68.2%) were applied to check the model

Table 3 QOL and productivity parameters observed in patients with psoriatic arthritis

Parameters	Arthritis Present (n=1,905)		Arthritis Absent (n=11,967)		Simple Logistic Regression**		
	n	%	n	%	Crude OR	(95% CI)	P-value
DLQI, mean (SD)							
\leq 10	685	13.9	4,250	86.1	1.00	(ref.)	
>10	417	17.4	1,982	82.6	1.31	1.14, 1.49	<0.001
No. of clinic visit*, median (IQR)							<0.001
0 time	362	12.7	2,481	87.3	1.00	(ref.)	
1-2 times	953	12.8	6,466	87.2	1.01	0.89, 1.15	0.879
3-10 times	450	16.9	2,210	83.1	1.40	1.20, 1.62	<0.001
11-48 times	24	22.6	82	77.4	2.01	1.26, 3.20	0.004
No. of days off work*, median (IQR)							<0.001
0 day	1,576	13.1	10,451	86.9	1.00	(ref.)	
1-3 days	98	17.8	454	82.2	1.43	1.14, 1.79	0.002
4-10 days	49	25.3	145	74.7	2.24	1.61, 3.11	<0.001
11-90 days	35	31.2	77	68.8	3.01	2.01, 4.51	<0.001
No. of hospital admissions*, median (IQR)							<0.001
0 time	1,708	13.4	11,009	86.6	1.00	(ref.)	
1-2 times	69	26.6	190	73.4	2.34	1.77, 3.10	<0.001
3-15 times	10	31.2	22	68.8	2.93	1.39, 6.20	0.005

*Over a 6-month period.

IQR = 75th - 25th percentile.

**Result was based on available information.

CONCLUSION

13.4% of psoriasis patients in Malaysia have PsA. Patients with PsA also have increased cardiovascular co-morbidities and reduced quality of life. Independent risk factors for PsA were older patients, younger age of onset, longer duration of disease, female gender, Indian ethnicity, severe disease, presence of nail involvement and DLQI > 10.

ACKNOWLEDGEMENT

We would like to thank all doctors and allied health personnel from the participating centres. We also acknowledge the support of Clinical Research Centre, Ministry of Health Malaysia and Dermatological Society of Malaysia.