



Shin Yi Ooi, Chai Har Loo, Norazlima Bt. Mohd Ali, Yek Huan Khor, Wooi Chiang Tan

Department of Dermatology, Hospital Pulau Pinang, Penang, Malaysia

Introduction

Ultraviolet phototherapy is one of the effective treatments for psoriasis on top of topical and systemic agents. The service of phototherapy is available in most of the tertiary centre in Malaysia.

Objectives

To evaluate the demographics of patients underwent phototherapy and their response to phototherapy in Malaysia.

Material and methods

This is a multi-centre retrospective cross-sectional study of all adult patients aged 17 years and above on phototherapy who were notified to MPR from year 2007-2016. The diagnosis of psoriasis was defined clinically. Severity of disease was assessed using the body surface area (BSA) while quality of life was evaluated using Dermatology Life Quality Index (DLQI). Good response to phototherapy is defined as at least 50% improvement from baseline BSA or improvement of more than 5 points of DLQI.

Results

A total of 2.6% patients, or 406 patients had utilize phototherapy service from the 15,753 psoriasis patients registered to the MPR. There are total of 169 patients who have more than 1 notification to MPR. Their demographic breakdown as below:

Table 1. Demographic distribution of patients

Factor	N(%)
Gender	
Male	259 (63.8%)
Female	147 (36.2%)
Ethnic	
Malay	213 (52.5%)
Chinese	107 (26.4%)
Indian	64 (15.8%)
Other	22 (5.4%)
Mean age of the onset of psoriasis	29.6 years old(SD ± 13.5)

Table 2. Types and severity of psoriasis by body surface area (BSA)

Types	Percentage
Plaque psoriasis	87.9%
Erythrodermic psoriasis	3.2%
Guttate psoriasis	2.2%
Localized psoriasis	0.2%
Palmoplantar psoriasis	0.2%
Severity	
BSA >10%	48.5%
BSA 5-10%	33.1%
BSA <5%	18.3%

Table 3 Modalities of phototherapy

Modalities	Percentage
NBUVB	90.9%
PUVA	2.7%
Topical PUVA	2.0%
BBUVB	1.7%
Bath PUVA	0.7%
Others	3.4%

Table 4. Concomitant systemic therapy and effect on DLQI

	N (%)
Systemic therapies within past 6 months	140 (34.5%)
Methotrexate	112 (80%)
Acitretin	46 (41%)
Cyclosporin	14 (10%)
Sulphasalazine	7 (5%)
Biologics	6 (4.3%)
Others	9 (6.4%)
Mean score for DLQI	11 +—6.9

Table 5. Number of patients with follow up notification and their treatment response to phototherapy

	N (%)
Patient with follow up notification	169
Good Response to phototherapy	122 (72.2%)

Discussion

- Vaani et al had undertook a retrospective review on the usage of phototherapy in Hospital Kuala Lumpur between year 2011 and 2015 and showed that the most common indication for phototherapy was psoriasis, with narrow band UVB (NBUVB) is the most popular option¹.
- Plaque psoriasis is the most common type of psoriasis that underwent phototherapy.
- 81.6% of patients that underwent phototherapy had BSA involvement of more than 5%.
- Narrow band UVB consists of 90.9% of phototherapy done.
- Majority of patients on NBUVB as many studies has shown its efficacy comparable with PUVA but less side effect².
- Nearly one third of patients had concomitant systemic therapy, with methotrexate the most popular option (69.6%), followed by acitretin (41.1%).
- 72.2% of them are reported good response to phototherapy. Their DLQI and clinical score had improve significantly after phototherapy on serial follow up ($p=0.005$).
- 19 patients had undergone combination of retinoids on top of phototherapy. However they did not achieve statistically significant improvement in our study.
- There is a trend that phototherapy utilization for psoriasis is increasing in United States between year 2000-2015 based on a study published by Tan S et al despite the growth of alternative options³
- Phototherapy still plays a big role in this era of biologics as phototherapy still remains one of the most cost effective treatments and is also one of the safest⁴.

Conclusion

- Phototherapy remains a cost-effective therapy.
- It is important to ensure continued access to phototherapy in giving patients choices in their therapeutic options.
- However, it is underutilized in Malaysia as only 5.1% of patients that had BSA >5% had underwent phototherapy according to our MPR data.

References

1. Visuvanathan VV, Tang MM, Tan LL, Johar A. The utilization of phototherapy in the department of dermatology, Hospital Kuala Lumpur: A 5-year audit. *Med J Malaysia*. 2018 Jun;73(3):125-130
2. Lapolla W, Yentzer BA, Bagel J, Halvorson CR, Feldman SR. A review of phototherapy protocols for psoriasis treatment. *J Am Acad Dermatol*. 2011;64:936–949. doi:10.1016/j.jaad.2009.12.054
3. Tan S, Buzney E, Mostaghimi A, Trends in phototherapy utilization among Medicare beneficiaries in the United States, 2000-2015, *Journal of the American Academy of Dermatology* (2018), doi: 10.1016/j.jaad.2018.03.018.
4. Miller DW, Feldman SR. Cost-effectiveness of moderate-to-severe psoriasis treatment *Expert Opin Pharmacother*. 2006;7(2):157-167.