16

Clinical profile, treatment and quality of life of Paediatric Psoriasis in Malaysia: a 12-year data from Malaysian Psoriasis Registry (2007-2018)

Dy-Win Low, Min Moon Tang, Kin Fon Leong, Sabeera Begum

Department of Dermatology Hospital Kuala Lumpur

Paediatric Institute Hospital Kuala Lumpur

Introduction

Psoriasis is not uncommon in children and adolescents. It causes significant physical and psychological burden on patients and adversely affect their quality of life. Here we aim to describe the clinical profile, treatment and quality of life of paediatric psoriasis in Malaysia.

Materials and methods

Study design & population: Retrospective observational study on all children and adolescents aged below 19 years captured between July 2007 and December 2018, were extracted from the Malaysian Psoriasis Registry (MPR) and further analysed.

Results

A total of 2000 (9.15%) children and adolescents were captured from 21859 patients who were registered to MPR.

Table 1: Demographics data of 2000 paediatric psoriasis

Demographics	n=2000 (%)
Gender	
Male	831 (41.6)
Female	1169 (58.5)
Ethnicity	
Malay	1428 (71.4)
Chinese	146 (7.3)
Indian	231 (11.6)
Others	195 (9.8)
Nationality	
Malaysian	1996 (99.8)
Non Malaysian	4 (0.2)
Median age of onset (years)	10.9±4.4
Family history of psoriasis	353 (23.4%)

Table 2: Clinical characteristics of psoriasis in pediatric <19 years

Clinical Characteristics	n=2000 (%)
Type of psoriasis	
Plaque psoriasis	1574 (86.2)
Gutatte psoriasis	137 (7.5)
Scalp psoriasis	60 (3.3)
Flexural psoriasis	16 (0.9)
Pustular psoriasis	14 (0.8)
Erythrodermic psoriasis	11 (0.6)
Palmoplantar non-pustular psoriasis	7 (0.4)
**missing data=173*	
Severity of psoriasis	
BSA<5%	505 (60.8)
BSA5-10%	174 (21.0)
BSA>10-90%	144 (17.3)
BSA>90%	7 (0.8)
**missing data=1170*	
Nail involvement	613 (36.8)
Joint involvement	**54 (2.9)**
Oligo/monoarthropathy	17 (31.5)
Symmertrical polyarthropathy	9 (16.7)
Distal hand joint arthropathy	11 (20.4)
Spondylitis/ sacroiliiatis	2 (3.7)
Athritis mutilans	0 (0.0)
Co-morbidities	
Underweight (BMI<18.5)	576 (33.0)
Obese (BMI >30)	205 (11.7)
Asthma	32 (1.6)
Down syndrome	19 (1.0)
Diabetes mellitus	13 (0.7)
Hypertension	8 (0.5)
Hyperlipidemia	8 (0.5)
Vetricular septal defect	4 (0.2)
Ischaemic heart disease	0 (0.0)
Quality of life	**(n=283)**
No effect at all (0-1)	13 (4.6)
Small effect (2-6)	49 (17.3)
Moderate effect (7-12)	137 (48.4)
Very large effect (13-18)	67 (23.7)
Extremely large effect (19-30)	17 (6.0)
Mean DLQI	**(n=269)**
5 to 16 years	10.83 ± 4.3
≥ 17 years	9.7± 6.1

Table 3. Treatment modalities prescribed to paediatric psoriasis

Characteristics	Numbers (%)
Topical treatment	**1745 (92.4)**
Topical steroids	1480 (86.4)
Emollient	1228 (65.0)
Tar preparation	1148 (60.8)
Keratolytics	819 (43.4)
Vitamin D analogues	221 (11.7)
Calcipotriol with betamethasone	162 (8.6)
Dithranol	33 (1.7)
Phototherapy	**17 (0.9)**
BB UVB	0 (0.0)
NB UVB	16 (0.8)
Oral PUVA	0 (0.0)
Bath PUVA	0 (0.0)
Topical PUVA	1 (0.1)
Excimer laser	0 (0.0)
Systemic Therapy	**108 (5.8)**
Methotrexate	63 (3.4)
Acitretin	32 (1.7)
Sulphasalazine	1 (0.1)
Cyclosporin	2 (0.1)
Hydroxyurea	0 (0.0)
Biologics	0 (0.0)
Systemic Corticosteroids	11 (0.6)

Discussion

- Plaque psoriasis is the most common variant (86.2%)in our cohort, which is comparable to the report in the literature.[1]
- Obesity has been described as a risk factor for psoriasis in paediatric.[2]
  - The crude ORs for psoriasis were 0.62 (95% CI,0.40 to 0.95), 1.00, 1.38 (1.20 to 1.58), 1.33 (1.13 to 1.55), and 1.86 (1.55 to 2.24) for underweight, normal-weight, overweight, moderately obese, and extremely obese patients, respectively.[2]
  - Interestingly a third of our cohort were underweight. This is higher compare to 7.8% in national paediatric population.[3] In addition, 11.7% of our cohort were obese which is comparable to national paediatric population, 11.9%.[3] These merit further research.
- Several prevalence studies have demonstrated that paediatrics with psoriasis may be associated with diabetes mellitus, hyperlipidemia, hypertension, cardiovascular disease, rheumatoid arthritis(RA) and Crohn's disease[4] which was noted in our study except RA and Crohn's disease.
- It has been reported that 0.5-8% of Down's syndrome may develop psoriasis.[5] In our cohort, 0.95% of paediatric psoriasis had Down's syndrome.
- The quality of life (QoL) of our paediatrics was significantly affected by psoriasis although about 80% had mild to moderate disease (skin lesions affecting less than 10% BSA).
  - Majority (78.1%) of the cohort had at least moderately to extremely large effect on their QoL assessed by DLQI.
  - The mean Children's Dermatology Life Quality Index (CDLQI 5-16 years) and DLQI (≥17 years) were 10.8±4,3 and 9.7±6.1 respectively which were higher than in other studies (average=7.7).[6]
- Managing pediatric psoriasis is challenging.
  - Use of some topical treatment are mainly off label in this age group.[1] For example, topical calcipotriol with betamethasone dipropionate only approved for child age 12 years and above.
  - Phototherapy can be challenging especially for younger kids as they may not follow instructions and can be time consuming.[1]
  - The evidence of systemic treatment in paediatric patients is lacking[1] in terms of efficacy, safety and long term data. Dermatologists have to rely on published case reports, case series, guidelines for adult psoriasis and expert opinions.

Conclusions

Majority of our children and adolescents with psoriasis had plaque psoriasis. Majority were treated with topicals. Quality of life of our paediatric psoriasis was significantly affected.

References:

1.Eichenfield LF et al. Pediatr Dermatol. 2018; 00: 1-12.
2.Koebnick C et al. J Pediatr. 2011;159:577–83.
3.MOH. NHMS 2015;77-78.
4.Augustin M et al. Br J Dermatol 2010; 162: 633–636.
5.Madan V et al. Clin Exp Dermatol.2006; 31: 623-629.
6.Randa H et al. Acta Derm Venereol.2017;97: 555-563.