

Pattern and clinical characteristics of patients with nail psoriasis in Sarawak General Hospital, Malaysia

Sir,

Nail changes are common among patients with psoriasis. In Malaysia, 68% of 509 patients with psoriasis surveyed had nail disease.^[1] There is lack of data on this condition in Sarawak. Thus, this study was designed to determine the pattern and clinical characteristics of patients with nail psoriasis in Skin Clinic, Sarawak General Hospital between November 2007 and March 2009.

The protocol of this study was approved by the Ethics Committee, National Institute of Health, Malaysia as part of the Malaysian Psoriasis Registry. All the patients with clinical diagnosis of psoriasis who gave voluntarily consent were studied. We collected data on nail disease, demographics and skin psoriasis. The nail psoriasis was divided into four types, namely pitting, onycholysis, discoloration and subungual hyperkeratosis. We excluded nail diseases due to other causes e.g. onychomycosis and drugs. Demographic data include age, gender, race, body mass index (BMI) and family history of psoriasis. Information on skin psoriasis includes duration of disease, body surface areas (BSA) involvement, treatment administered and quality of life measured by the dermatology life quality index (DLQI).

The data was statistically analyzed with the SPSS ver. 15 (SPSS Inc., Chicago). Categorical data was analyzed with Chi square test and expressed as frequencies and percentages. Continuous data was analyzed with Student *t* test and expressed as mean \pm standard deviation (SD). The level of significance was set at $P < 0.05$.

All 520 patients with psoriasis attending the skin clinic during the study period consented for the study. Nail psoriasis was seen in 341 (65.6%) patients. Subungual hyperkeratosis was seen in 90%, discoloration in 74.5%, onycholysis in 65.1%, and nail pitting in 50.4%. There were 209 (61.3%) male patients and 132 (38.7%) female patients. Chinese constituted 41.9% followed by Malays 31.7%, Bidayuhs 12.9%, Ibans 10.3% and others 3.2%. This corresponded to the racial distribution of the clinic.

Table 1 shows the differences in the clinical characteristics of patients with and without nail psoriasis. We found that the mean age of patients with nail psoriasis was significantly older (47.4 c.f. 42.8, $P = 0.005$). Patients with nail disease tended to be male (61.3% c.f. 41.3%, $P < 0.001$) and of Chinese race (41.9% c.f. 29.6%, $P = 0.006$). We also observed 20.8% of patients with nail psoriasis had body surface area involvement of more than 10% compared to only 5% in those without ($P < 0.001$). However, we did not find any association between duration of disease, family history of psoriasis, BMI, DLQI and psoriatic arthropathy.

Patients with nail diseases were more likely to be on systemic treatment (38.7% c.f. 20.7%, $P < 0.001$). All the patients with nail psoriasis had combined topical

Table 1: Clinical characteristics of psoriatic patients with and without nail disease

Variables	With nail disease (n=341)	Without nail disease (n=179)	P value
Age (mean \pm SD/years)	47.4 \pm 16.63	42.8 \pm 18.32	0.005
Male gender	209 (61.3%)	74 (41.3%)	<0.001
Chinese race	143 (41.9%)	53 (29.6%)	0.006
Duration of psoriasis (mean \pm SD/years)	10.3 \pm 9.59	8.6 \pm 9.22	0.063
Family members with psoriasis	56 (16.4%)	30 (16.8%)	0.922
BMI (mean \pm SD)	26.3 \pm 4.94	26.6 \pm 6.92	0.602
BSA>10%	71 (20.8%)	9 (5.0%)	<0.001
Presence of joint disease	71 (20.8%)	27 (15.1%)	0.112
DLQI score (mean \pm SD)	5.2 \pm 5.18	5.4 \pm 5.28	0.678
Systemic treatment	132 (38.7%)	37 (20.7%)	<0.001

clobetasol dipropionate and calcipotriol for their nail disease. None had steroid injections of the nail matrix. Systemic agents used included methotrexate in 31.7%, cyclosporine 5.9%, acitretin 5.6%, sulfasalazine 2.9%, systemic corticosteroids 1.8%, hydroxyurea 0.3% and etanercept in 0.3%.

The pattern of nail disease seen in Sarawak General Hospital was different from national and regional pattern. In Malaysia and Singapore, the main pattern seen was pitting, followed by onycholysis, subungual hyperkeratosis and discoloration.^[1,2] In India, the pattern was onycholysis followed by discoloration, pitting and subungual hyperkeratosis.^[3]

According to the findings of this study, nail psoriasis is more common in males and those with more severe skin disease as seen in Singapore.^[2] Additionally, they found an association with older patients and joint psoriasis.^[2] The association of joint and nail psoriasis was also demonstrated in India.^[4] We failed to demonstrate this association. This might be due to the low pick up rate of arthritis among our patients. We also found that Chinese were more likely to have nail disease compared to the native community in Sarawak. The reason for the lower rate of nail disease among the native community in Sarawak is unknown.

We also failed to demonstrate any association of nail disease and quality of life, although patients with nail psoriasis had more severe skin disease. This might be related to the higher rate of nail psoriasis among the older patients, who are less cosmetically concerned about the appearance of their nails and skin. It is also related to the attitude of the locals who do not complain about their disease and just accept their condition as it is.

In conclusion, the pattern of nail psoriasis in Sarawak is different from national and regional pattern. Nail psoriasis in Sarawak is associated with older age, Chinese race, male gender and more severe skin psoriasis.

Felix Boon-Bin Yap, Muniandy Pubalan

Department of Dermatology, Sarawak General Hospital, Jalan Hospital, 93586 Kuching, Sarawak, Malaysia

Address for correspondence: Dr. Felix Boon-Bin Yap,
Department of Dermatology, Sarawak General Hospital,
Jalan Hospital, 93586 Kuching, Sarawak, Malaysia.
E-mail: woodzlamp@yahoo.com

DOI: 10.4103/0378-6323.72447 -

REFERENCES

1. Chang CC, Gangaram HB, Hussein SH. Malaysian Psoriasis Registry--preliminary report of a pilot study using a newly revised registry form. *Med J Malaysia* 2008;63:68-71.
2. Tham SN, Lim JJ, Tay SH, Chiew YF, Chua TN, Tan E, *et al.* Clinical observations on nail changes in psoriasis. *Ann Acad Med Singapore* 1988;17:482-5.
3. Grover C, Reddy BS, Chatuverdi KU. Diagnosis of nail psoriasis: importance of biopsy and histopathology. *Br J Dermatol* 2005;153:1153-8.
4. Ghosal A, Gangopadhyay DN, Chanda M, Das NK. Study of nail changes in psoriasis. *Indian J Dermatol* 2004;49:18-21.