

Changes in the Patch Test Population Over a Ten-Year Period at the Contact Dermatitis Clinic, Siriraj Hospital: A University-Based Tertiary Care Hospital in Thailand

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ABSTRACT

Background: There are several factors which have an impact on patch test results. In the past, comparing the populations between different institutes, without appropriate indicators was difficult. Thus, the MOAHLFA index (Male, Occupational, Atopic dermatitis, Hand dermatitis, Leg dermatitis, Face dermatitis and Age above 40 years) was developed. However, the study of this index in Thailand is limited.

Objective: To investigate the MOAHLFA index in patch testing population in the Contact Dermatitis Clinic at Siriraj Hospital.

Methods: The clinical parameters of patients who underwent patch testing at Contact Dermatitis Clinic, Siriraj Hospital during 10 years were studied.

Results: Our patch test population showed a statistically significant increase in the proportion of male and patients aged above 40 years while a statistical decrease was found in those with occupational skin diseases with a history of atopic dermatitis, and lesions on the hands during a decade.

Conclusion: This study revealed patch-test population attending Siriraj contact dermatitis clinic changed in 10-years period. According to MOAHLFA index, the changes were increasing of male, aged >40 years but decreasing of atopic, occupational-related contact allergy patients.

Keywords: MOAHLFA index; contact dermatitis population; Thailand (Siriraj Med J 2017;69:32-34)

INTRODUCTION

Contact sensitization rates of individual allergens have varied between centres, and countries which are influenced by many factors such as contact allergen exposure, culture, and careers. The MOAHLFA index, which comprises the following clinical parameters: male, occupation, atopic dermatitis, hand-leg-face dermatitis, and age >40 years, was developed and has proven suitable for explaining different sensitization rates within diverse patch test population among different centres/countries.¹ Studies in the MOAHLFA index in Thai population or other Asian populations are limited. We assessed the MOAHLFA index in a contact dermatitis clinic setting at Thailand's largest university-based tertiary care hospital, Siriraj Hospital, that is located in Bangkok, Thailand.

MATERIALS AND METHODS

The Siriraj Institutional Review Board authorized this retrospective study of the use of clinical data of patients who were patch tested by the Contact Dermatitis Clinic, Siriraj Hospital, Mahidol University during January 2005 to December 2014 (Si 047/2015). The patients who were suspected of having allergic contact dermatitis from either daily or occupational exposure to contact allergens, were referred to the clinic for patch testing. The demographic data of 2415 patients were evaluated. Data were analysed by chi-square test for linear trend. PASW Statistics 18.0 (SPSS, Inc., Chicago, IL, USA) was used for statistical analysis, with p-value < 0.05 indicating statistical significance.

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RESULTS

Seven factors considering MOAHLFA index of the patch tested patients were compared, as shown in Table 1. There was a statistically significant increase in the proportion of male and patients aged above 40 years while a statistical decrease was found in those with occupational skin diseases with a history of atopic dermatitis, and lesions on the hands.

Thai MOAHLFA index was compared to those of previous reports from European countries, as in Fig 1. Thai male and atopic patients having patch test were less than males in Europe. Patch test patients aged >40 year-old has shown increasing trend as in other reported countries.

TABLE 1. The MOAHLFA index over 10-year period.

MOAHLFA index	N (%)					p-trend	Total
	2005-6	2007-8	2009-10	2011-12	2013-14		
Male	37 (17.9)	67 (19)	79 (18.6)	139 (21.5)	181 (23.1)	0.023	503 (20.8)
Occupational	54 (26.1)	60 (17)	106 (24.9)	118 (18.2)	109 (13.9)	<0.001	447 (18.5)
Atopic dermatitis	24 (11.6)	28 (7.9)	41 (9.6)	30 (4.6)	37 (4.7)	<0.001	160 (6.6)
Hands	105 (50.7)	148 (41.9)	166 (39.1)	229 (35.3)	237 (30.3)	<0.001	885 (36.6)
Leg	33 (15.9)	44 (12.5)	60 (14.1)	90 (13.9)	131 (16.8)	0.222	358 (14.8)
Face	80 (38.6)	131 (37.1)	165 (38.8)	217 (33.5)	273 (34.9)	0.132	866 (35.9)
Age >40 years	100 (48.3)	154 (43.6)	220 (51.8)	348 (53.7)	415 (53.1)	0.009	1,237 (51.2)

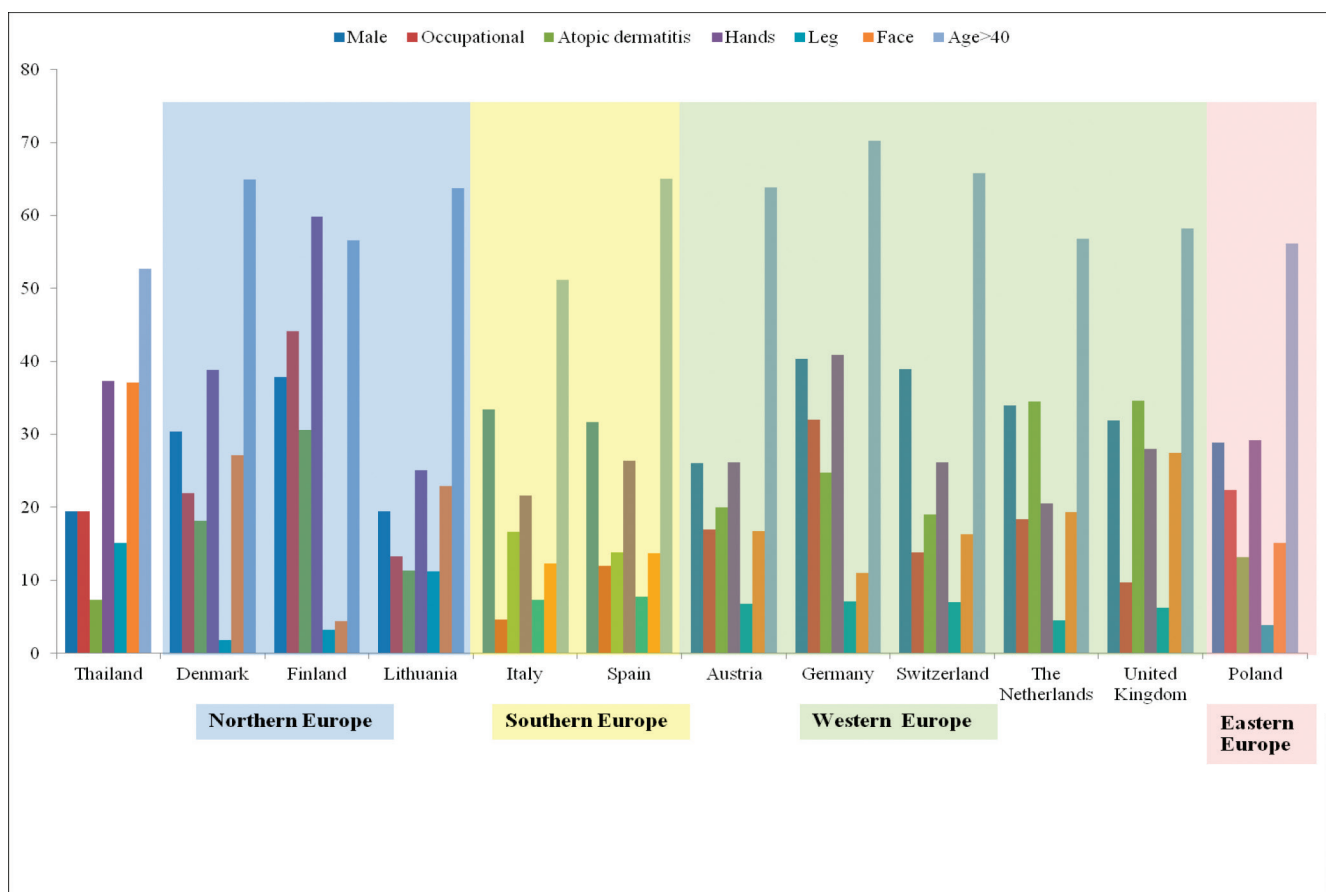


Fig 1. Comparison of MOAHLFA indices between our study and study from European countries²

DISCUSSION

The MOAHLFA index of patients attending Contact Dermatitis Clinic, Siriraj Hospital, which comprises the following clinical parameters: male, occupation, atopic dermatitis, hand-leg-face dermatitis, and age >40 years, was assessed. The results will be fundamental for explaining different sensitization rates of our patch test population with different centres/countries.

The increasing proportion of males being patch tested at our centre can be explained by increased concern among males regarding skin conditions nowadays. This finding is supported by continuous increases in demand for male skin care products worldwide. The more exposure to many ingredients of those skin care products, the more contact allergy is found. There have been increases in male patient's ratios in skin clinics. However, our male proportion was still lower than that of a recent European study², which may be due to more concern about allergies or more exposure to skin sensitizers in European men.

Occupational skin diseases and hand dermatitis showed a significant decline, which may be explained by improvements in occupational health and safety standards among workplaces/ industries. However, differences in indices between countries may reflect differences in systematic data collection and/or the effectiveness of the patient referral system.²

Our atopic dermatitis patient proportion showed a significantly decreasing trend during a decade, in contrast to worldwide increases in this condition. Atopic patients are able to concomitantly present with allergic contact dermatitis, so diagnostic awareness of both conditions is essential. Investigation by patch testing should be encouraged among dermatology practice.

Our proportion of patients aged >40 was comparable to previous studies.^{2,3} Globally, growth in the elderly population has almost doubled in a decade, with further increases expected in the next decade.⁴ Thailand will also become an ageing society within a few years, according to the United Nations' projection.

The patch test population at our centre has changed significantly over the last decade. The proportion of males and patients aged >40 increased significantly, with notable decreases in occupational associations, atopic dermatitis, and hand lesions. This data was from a single-center study and may not be nationally or regionally generalizable. Based on our review of the literature, this is the first MOAHLFA index study from this region in decades.

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