

CONTACT DERMATITIS AND OCCUPATIONAL DERMATOSES

## EMERGING ALLERGENS IN THAI CONTACT DERMATITIS PATIENTS: A TWELVE-YEAR RETROSPECTIVE REVIEW.

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**Introduction:** Environmental exposure of known contact allergens were often changed; therefore continuous contact allergen surveillance is necessary for detecting trends of allergenicity rates and emerging allergens.

**Objectives:** The objectives were to investigate trends of screening patch test allergy and identify emerging allergens in Thailand during 12-year period.

**Materials and Methods:** Medical records of 2,813 patients who underwent patch testing in Contact Dermatitis Clinic, Siriraj Hospital, between 1 July 2006 and 31 June 2018, were retrospectively reviewed and analysed. The screening baseline series were adapted from European baseline and International Standard Series.

**Results:** The most frequent positive patch testing allergens were nickel sulfate (25.1%), Methylisothiazolinone (14.9%), potassium dichromate (14.2%), fragrance mix I (12.9%), and Methylchlorisothiazolinone/methylisothiazolinone (MCI/MI) (11.4%). MCI/MI was the only allergen that had significant increasing rate of positive reaction ( $p < 0.0001$ ). MCI/MI allergy was found more common in female and patients aged between 36 to 50 years (OR (95%CI) = 2.45 (1.68-3.57), 1.76 (1.30-2.39), respectively,  $p < 0.0001$ ). However, cases with positive patch test reaction to MCI/MI tended to fall in a recent 2-year period. Positive reaction rates of nickel sulfate, fragrance mix I/II, potassium dichromate, cobalt (II) chloride, carba mix, methyldibromo-glutaronitrile, paraben mix, neomycin sulfate, thiuram mix, lanolin alcohol, 4-tert-butylphenol formaldehyde resin, epoxy resin, quaternium-15, N-Isopropyl-N-phenyl-4-phenylethylenediamine, compositae mix II, and corticosteroids group were significantly decreased.

**Conclusions:** MCI/MI was the emerging allergen of the past decade, whereas many substances used in screening patch test series tended to have a decrease number of positive reactions during past 12 years. Continuous monitoring of allergens used for patch testing is important to modify the allergen used in patch test standard series.