Poster-discussion: Heat

P180 OCCUPATIONAL NATURAL HEAT EXPOSURE AND ITS HEALTH EFFECTS ON SALT PRODUCTION WORKERS IN SAMUTSONGKHRAM PROVINCE, THAILAND

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Objectives to determine the situation and the association between natural heat and salt production workers' health.
Methods The cross-sectional study was conducted in Samutsongkhram province, Thailand, during April to September 2009. The working environmental heat was measured with Wet Bulb Globe Temperature (WBGT) model RSS-214DL by area sampling. Interview was conducted to collect the demographic data, occupation history, job description and health symptoms. Individual heat exposure was measure by ear thermometer. The physiological changes were measured by urine specific gravity with refregtometer and vital sign checking.
Results average temperature in the working environment was 33.83+0.95 oC. Of 171 salt production workers, 35.67% of worker had adverse health effect from heat during data collection, including heat exhaustion (67.21%), skin rash (26.22%) and heat cramp (6.55%), respectively. The correlation was only noted between temperature in the working environment and physical change with urine specific gravity ($r=0.89$, $p<0.01$). When classified by work load, there is dose-response between work load and percentage with heat symptoms (p for trend=0.04). The workers who work in environmental heat above standard threshold limit of Thai labour law had statistical significantly higher proportion of heat symptoms than other group ($p<0.01$).
Conclusions natural heat in working environment was a potential source of health hazard for salt production workers. The occupational heath provider should be concerned with this problem and implementing occupational health service for prevention of this problem.