MATERNAL OCCUPATION DURING PREGNANCY AND PEDIATRIC ATOPIC DERMATITIS

I-Jen Wang, *Taipei Hospital, Department of Health, Taipei; China Medical University, Taichung, Taiwan*
Shoei-Loong Lin, *Taipei Hospital, Department of Health, Taipei, Taiwan;*
Pau-Chung Chen, *National Taiwan University College of Public Health, Taiwan*

Background and Aims Ž Maternal employment during pregnancy has been considered to be associated with prematurity and low birth weight. However, little is known about the effect of maternal employment on the development of atopic disorders. We want to evaluate associations between maternal employment status and atopic dermatitis (AD).
Methods: We used multistage, stratified systematic sampling to recruit 24,200 mother-newborn pairs from the Taiwan national birth registration in 2005. Maternal occupation categories, working hours, shift work, work stress, and potential confounders during pregnancy were gathered by questionnaires at 6 months of age. Information about development of AD was also collected at 6 months of age. Multiple logistic regression analysis was performed to estimate the association of maternal employment status and AD.
Results: Work stress during pregnancy increased the risk of AD in the offspring (OR=1.5, 95%CI=1.00~2.95). Those who work during pregnancy increased the risk of AD in the offspring compared to those without work (OR=1.44 95%CI=1.00~2.95). Shift work and working hours during pregnancy might increase the risk of AD, but failed to reach statistical significance.
Conclusions: Work stress during pregnancy increased the risk of AD in the offspring. However, there was no evidence that maternal shift work or long working hours had a higher risk of AD. Further follow-up study is warranted for other allergic diseases.

Keywords: atopic dermatitis; pregnancy; occupation

References:
1.Orita K, Hiramoto K, Inoue R, Sato EF, Kobayashi H, Ishii M, Inoue M. (2010) Strong exercise stress exacerbates dermatitis in atopic model mice, NC/Nga mice, while proper exercise reduces it. Exp Dermatol. 19:1067-1072.
2. Peters EM, Liezmann C, Spatz K, Daniltchenko M, Joachim R, Gimenez-Rivera A, Hendrix S, Botchkarev VA, Brandner JM, Klapp BF.(2011) Nerve growth factor partially recovers inflamed skin from stress-induced worsening in allergic inflammation. J Invest Dermatol. 131:735-743.
3.Oh SH, Bae BG, Park CO, Noh JY, Park IH, Wu WH, Lee KH. (2010) Association of stress with symptoms of atopic dermatitis. Acta Derm Venereol. 90:582-588.