

번호: PO-EM-008					
제 목	새집 거주자들과 아토피 피부염 환자의 유전독성 GENOTOXICITY OF SICK HOUSE SYNDROME AND ATOPIC DERMATITIS PATIENTS				
저 자 및 소 속	이은일1),2),3), 오은하2), 이주현2),3), 박선영2),3), 홍은영2),3) 1)고려대학교 의과대학 예방의학교실, 2) 유전체 및 단백질 환경독성의과학센터, 3)고려대학교 보건학과 Lee E1),2),3), Oh E2), Lee J2),3), Park S2),3), Hong E2),3) 1)Department of Preventive Medicine, 2)Medical Research Center for Environmental Toxico-Genomics and Proteomics, 3)Department of Public Health, School of Medicine, Korea University, Seoul, Korea				
분 야	환경의학 [독성물질-화학적 및 물리적 인자]	발 표 자		발 표 형 식	포스터
<p>Sick house syndrome is recognized socially, however, there is no medical definition. Causes of sick house syndrome may be very diverse.</p> <p>We investigated six volunteers who moved into new apartments to evaluate indoor concentration of formaldehyde, and genotoxicity and oxidative stress of volunteers.</p> <p>Mean concentration of formaldehyde in new apartment was 0.97 ppm which was about 12 times higher to indoor formaldehyde guideline in Japan (0.08 ppm). We also investigated atopic dermatitis patients (N=16) to evaluate oxidative stress and genotoxicity. This study demonstrates that the mean tail moment of six volunteers, atopic dermatitis patients and control group (N=25) by Comet assay were <math>2.10 \pm 0.10</math>, <math>1.89 \pm 0.38</math>, <math>1.51 \pm 0.22</math> respectively. Urinary MDAs (Malondialdehyde) were <math>3.69 \pm 3.27 \mu\text{Mol/mol Cr}</math>, <math>1.64 \pm 1.04</math>, <math>0.87 \pm 0.35</math> respectively. Three atopic dermatitis patients (18.7%) among sixteen patients showed positive gene expression of glutathion peroxidase 1 by RT-PCR. Non of six volunteers and control group showed positive expression of glutathion peroxidase 1. All atopic dermatitis patients, all six volunteers and 24 control subjects (only one exception) showed positive gene expression of superoxide dismutase by RT-PCR. All atopic dermatitis patients and volunteers showed increased apoptotic changes of lymphocytes evaluated by FACS and all control subjects did not showed apoptotic changes. In the present study, we found the genotoxicity of volunteers who moved into new apartment and atopic dermatitis patients with increased oxidative stress.</p> <p><b>Conclusions:</b> The volunteers with sick house syndrome and atopic dermatitis patients showed increased oxidative stress including ROS production, DNA damage of lymphocytes, plasma and urinary MDA, and protein carbonyl. This study suggested that systemic increased oxidative stress strongly related with sick house syndrome and atopic dermatitis. We are studing to evaluate the relationship of air pollutants with increased oxidative stress in sick house syndrome and atopic dermatitis.</p>					