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제목	국문	한국인들에서 소변중 1-hydroxypyrene 의 노출과 관련한 노출변수			
	영문	Effective factors on Urinary 1-hydroxypyrene in a Korean population			
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<p>1. 목적</p> <p>Urinary 1-hydroxypyrene (1-OHP) has been used as a biomarker for exposure to environmental carcinogenic polycyclic aromatic hydrocarbons (PAHs). For proper biological monitoring of the PAH exposure, associated factors with 1-OHP bioproduction should be clarified.</p> <p>2. 방법</p> <p>In this study, we investigated effects of lifestyle, environmental factors, and genetic polymorphisms of metabolic enzymes, i.g., GSTM1, GSTT1, CYP1A1, and CYP1B1 on urinary 1-OHP levels in 700 Korean population (male, 65 % ; female, 35 % ; mean-age, 36 yrs, std, 10.79 yrs) who were not occupationally exposed to PAHs. Using questionnaire, we obtained information of cigarette smoking, indoor heating-system, transportation, time-activity pattern housing-environment, consumption of well-done meat, vegetables, yogurts, coffee, alcohol, noodle, fruit etc. We analyzed urinary 1-OHP and cotinine, a biomarker of smoking, by HPLC. To determine genotypes of the enzymes, we used PCR-RFLP and single base extension method.</p> <p>3. 결과</p> <p>As results, urinary 1-OHP was detected in 76 % of the subjects (range, 0.1-3.8 ug/L). In the Korean population, CYP1B1 codon 48 and 119 polymorphism were completely linked and CYP1B1 codon 48 polymorphism was associated with codon 432 polymorphism (p &lt; 0.05). Urinary 1-OHP was correlated with urinary age, number of cigarette smoked before sampling, alcohol consumption, yogurts, fried chicken, noodle, spinage, apple, and pear consumption, outdoor remain time and GSTT1 polymorphism (Spearman Rank correlation, p &lt; 0.05). However, polymorphisms of GSTM1, CYP1A1, and CYP1B1 were not associated with urinary 1-OHP levels.</p> <p>4. 고찰</p> <p>After multiple regression analysis, urinary 1-OHP was associated with only number of cigarette smoked before sampling, pear, apple, yogurt consumption, fried chicken and ourdoor remain time and yogurt consumption( p &lt; 0.05).</p>					