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Air and Water Pollution – The Co-Relation of Polluted Air and Drinking Water Sources with the Prevalence of Systemic Lupus Erythematosus

Sung Kyun Park*

Department of Epidemiology and Environmental Health Sciences, University of Michigan, USA

Air pollution is associated with numerous diseases. In recent years, researches have more and more more showed that epigenetic changes usually occur on the early stage of diseases, and make greater contributions to the prevalence and development of diseases as compared to genetic abnormalities [1]. Thus, researches on epigenetic effects of air pollution would serve for better understanding the interaction between air pollutants and genome in the pathogenesis of disease. Meanwhile, in order to reduce the exposure to air pollution and diminish the adverse results related, further research are needed to identify epigenetic biomarkers of air pollution in order that we can take timely and effective measures in disease prevention.

Each pollutant has its personal health risk profile, which makes summarizing all applicable information into a brief chapter difficult. Nevertheless, public health practitioners and decision makers in growing international locations want to be aware of the potential health risks caused by air and water pollution and to know in which to find the more detailed information required handling a specific situation [2]. This chapter will not repeat the dialogue about indoor air pollution resulting from biomass burning and water pollution caused by poor sanitation on the family level; however it's going to consciousness at the troubles resulting from air and water pollution on the community, country, and global levels.

The co-relation of polluted air and drinking water sources with the prevalence of systemic lupus erythematosus:

Environmental exposures interact with genetic factors has been thought to influence susceptibility of systemic lupus erythematosus (SLE) improvement [3]. To evaluate the effects of environmental exposures on SLE, we conducted a population-based cohort look at throughout Jiangsu Province, China, to look at the associations among the living environment which includes air and water pollution, population density, economic income level, etc. and the prevalence and mortality of hospitalized SLE (h-SLE) patients [4]. A total of 2231 h-SLE patients have been retrieved from a longitudinal SLE database accrued through the Jiangsu Lupus Collaborative Group from 1999 to 2009. The outcomes confirmed that: It existed nearby differences on the prevalence of h-SLE patients in 96 administrative districts; The distribution of NO2 air attention monitored through atmospheric remote sensors showed that three of the ultra-high-incidence districts were placed in the focused chemical enterprise emission area; h-SLE patient prevalence become positively correlated with the immoderate tiers of nitrogen in drinking water; The positive ratio of pericarditis and proteinuria was positively correlated with the prevalence of h-SLE patients and pollution not most effective induced a high h-SLE patient incidence however also a higher mortality rate, which is probably attributed to NOx pollutants withinside the air and drinking water [5]. In summary, our data suggested that NOx in air and drinking water may be one of the important predispositions of SLE, particularly for patients with renal involvement.

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Conflict of Interest

None

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***Corresponding author:** Sung Kyun Park, Department of Epidemiology and Environmental Health Sciences, University of Michigan, USA, E-mail: sungkyunpark3@gmail.com

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