Poster Presentation

Reproductive Effects

0198 THE CHLORINATED HYDROCARBONS CONTAMINATED GROUNDWATER AND THE REPRODUCTIVE HAZARD

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10.1136/oemed-2017-104636.156

Our study was to investigate the association between the birth outcome and infant mortality among the community with chlorinated organic contaminated groundwater.

The parents who lived in the area around the factory from 1978 to 1997 were recruited. According to the groundwater hydrogeology, we classified into three areas, factory located as a high-exposure area, the downstream as low-exposure areas, and upstream as reference areas. Analysis with the multiple logistic regression and adjusted for infant sex, parity, maternal marital status, maternal age at birth, maternal education, and maternal occupation, the adjusted odds ratio for preterm delivery among the high-exposure and low-exposure areas. We exclude the population who ever worked in the factory. Associations between the exposure area and adverse birth outcomes were divided into four periods 1978–82, 1983–87, 1988–92, and 1993–97.

For the preterm delivery, the odds ratio for the factory located were 1.60 (CI=1.14–2.24) for the period of 1993–1997, 1.67 (CI=1.03–2.71) for the period of 1988–1992 and 1.57 (95% CI=1.07–2.30) for the downstream for the period of 1988–1992. For the low birth weight, the odds ratio for the downstream were 1.36 (CI=1.00–1.84) for the period of 1993–1997. The infant mortality have the trend for the

The Chlorinated Hydrocarbons organic solvents contaminated water and the environment could be increased the risk of preterm delivery and the low birth weight. The more evidence need more explore and further studies need to strength the relation.

Oral Presentation

Respiratory

0199 OCCUPATIONAL AND ENVIRONMENTAL RISK FACTORS FOR CHRONIC FIBROSING IDIOPATHIC INTERSTITIAL PNEUMONIA IN SOUTH KOREA

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10.1136/oemed-2017-104636.157

Background Idiopathic pulmonary fibrosis (IPF) and idiopathic nonspecific interstitial pneumonia (INSIP) have recently been classified together as chronic fibrosing idiopathic interstitial pneumonia (IIP). Occupational and environmental factors are

believed to be risk factors for the development of chronic pulmonary fibrosis. Previous case-control studies have suggested that occupational and environmental agents may contribute to the aetiology of IPF, but the association with INSIP has not been examined. Therefore, we aimed to evaluate the association of occupational and environmental agents with chronic fibrosing IIP, including INSIP.

Methods This was a retrospective case-control study performed at a university hospital in South Korea. We recruited patients with chronic fibrosing IIP diagnosed from January 2011 to December 2014 at a respiratory centre at our institute and randomly matched healthy controls who had normal chest X-ray findings by age and gender. Ninety-two chronic fibrosing IIP patients and 92 matched controls were analysed. We used a structured questionnaire to evaluate potential occupational and environmental risk factors for chronic fibrosing IIP, with adjustments for age, smoking, and clinical risk factors.

Results We used conditional logistic regression models to analyse associations with chronic fibrosing IIP adjusted for age, smoking and clinical risk factors. Exposure to stone, sand, or silica significantly increased the risk of chronic fibrosing IIP (odds ratio [OR]=5.01; 95% CI, 1.07–24.21).

Conclusions Our findings indicate that exposure to stone, sand, and silica might constitute a risk factor for developing chronic fibrosing IIP in the Korean population.

Oral Presentation

Exposure Assessment

0200 CREATION OF A QUANTITATIVE HISTORICAL JOB-EXPOSURE MATRIX FOR PLUTONIUM WORKERS AND FEASIBILITY OF ITS USE WITH RECONSTRUCTED OCCUPATIONAL HISTORIES FOR EPIDEMIOLOGICAL PURPOSES

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10.1136/oemed-2017-104636.158

Introduction The UK Sellafield workforce is important for studying potential health risks of plutonium (Pu) exposure. However, several hundred early workers, employed during the period 1952–63, have been excluded from epidemiological studies because their urinalysis results were insufficiently reliable to provide accurate exposure assessment. This project aimed to develop a job-exposure matrix (JEM) that would enable future inclusion of these workers in epidemiological studies.

Methods 630 plutonium workers without reliable Pu urinalysis data for 1952–63 were identified within fourteen 'homogeneous' plutonium exposure groups. For each job/work location/year, 'exposure analogues' with reliable urinalysis data were identified (n=330). The JEM was based on 4487 work history records and 6899 urinalysis results. Intake assessments were produced using the 'PuMA' plutonium mass assessment code employing the latest conventional assessment methodology.

Results The JEM provided estimates for the median plutonium intake in becquerel (Bq) per year for each job/work location/year combination, and ranged from "no intake" to 175 Bq/yr.