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. 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.

Background

Idiopathic pulmonary fibrosis (IPF) and idiopathic nonspecific interstitial pneumonia (NSIP) 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 NSIP has not been examined. Therefore, we aimed to evaluate the association of occupational and environmental agents with chronic fibrosing IIP, including NSIP.

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