Abstracts

Objective To determine relationship between occupational exposure to benzene-toluene-xylene mixture (BTX) and IL-10, TNF and IL-12 production by peripheral blood mononuclear cells.

Methods Exposure was estimated in 54 workers from a paint company in Mexico City through BTX accumulated potential dose (BTX-APD). Two exposure groups were formed: high and low BTX-APD established with a cutoff point at ≥1.0 of BTX-APD, as a function of the geometric mean of the estimator’s value distribution and the higher agreement between BTX-APD ≥1.0 and the areas referred as using (or not) organic solvents in the work process. IL-10, TNF and IL-12 concentrations were measured with ELISA. Through multiple linear regression models, the production of each of the proposed cytokines and of the whole set was assessed.

Results Workers with high BTX-APD showed a significant reduction in TNF production (β = -1.196.0 pg/mL; p = 0.01); a reduction for IL-10 (β = -520.3; p = 0.13) and IL-12 (β = -843.3; p = 0.09) was also observed, although without statistical significance.

Conclusions TNF production assessed in workers with a high BTX-APD is lower than that with a low BTX-APD, but not in IL-10 and IL-12 production.

112 BENCHMARK DOSE ESTIMATION OF HEMATOXICITY AND GENOTOXICITY AMONG CHINESE BENZENE EXPOSED WORKERS IN SHOE Factories

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Objectives Benzene exposure can induce hematotoxicity and hematotoxicity at occupational exposure level below 1 ppm according to previous reports. The purpose of this study was to calculate benchmark dose (BMD) for chromosomal damage and reduced white blood cell (WBC) induced by benzene among the exposed workers in Wenzhou, China.

Methods A group of 317 workers occupationally exposed to benzene and 102 unexposed workers were examined for hematotoxicity at occupational exposure level below 1 ppm according to previous reports. The purpose of this study was to calculate benchmark dose (BMD) for chromosomal damage and reduced white blood cell (WBC) induced by benzene among the exposed workers in Wenzhou, China.

Results Workers with high BTX-APD showed a significant reduction in TNF production (β = -1.196.0 pg/mL; p = 0.01); a reduction for IL-10 (β = -520.3; p = 0.13) and IL-12 (β = -843.3; p = 0.09) was also observed, although without statistical significance.

Conclusions TNF production assessed in workers with a high BTX-APD is lower than that with a low BTX-APD, but not in IL-10 and IL-12 production.

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114 CANCER-RELATED PROTEINS IN LUNG TISSUE FROM URANIUM MINERS - VARIATION BY OCCUPATIONAL EXPOSURE AND SUBTYPE OF LUNG CANCER

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