Poster Presentation

Burden of Disease

0270 MORTALITY FROM LUNG CANCER IN OCCUPATIONS WITH EXPOSURE TO ASBESTOS AMONG MEN IN ENGLAND AND WALES (1979–2010)

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The increase in production of Multi-Walled Carbon Nanotubes (MWCNTs) goes along with growing concerns about health risks. Few, rather small, studies have reported biological effects of MWCNTs in humans including increased concentrations of cardiovascular markers fibrinogen, ICAM1 and IL-6, but findings are largely inconsistent. The objective of this study was to assess the association between occupational exposure to MWCNTs and biomarkers of cardiovascular risk.

A cross-sectional biomarker study was performed among workers of a company commercially producing flexible MWCNTs and a matched unexposed population. 12 cardiovascular markers were measured in participants’ blood (phase 1). In a sub-population these measures were repeated after 5 months (phase 2). We analysed associations between MWCNT exposure and biomarkers of cardiovascular risk, corrected for age, BMI, sex and smoking.

22 exposed and 42 unexposed workers were included in phase 1 and a subgroup of 13 exposed workers and 6 unexposed workers in phase 2 of the study. Both in phase 1 and phase 2 we observed an upward trend in the concentration of endothelial damage marker ICAM-1, with increasing exposure to MWCNTs. This finding is supported by significantly elevated monocyte counts among the same workers. No significant associations were found between exposure to MWCNTs and the other cardiovascular markers tPA, Fibrinogen, VCAM-1, IL-6, E selectin, TNF-α and D-Dimer.

The results of the present study should be viewed as explorative and requires confirmation in larger studies. Our results for ICAM-1 point towards a potential for endothelial damage due to exposure to MWCNT.

Oral Presentation

Specific Occupations

0272 FINDING A SPACE FOR HEALTH WITHIN THE CONTEXT OF ‘OCCUPATIONAL RISK’ AND FARM POLICY: IRELAND’S ‘FARMERS HAVE HEARTS’ WORKPLACE CARDIOVASCULAR SCREENING PROGRAMME

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Background Irish farmers are a ‘high risk’ group in terms of CVD mortality compared to other occupation groups. Despite CVD being recognised as a work-related condition, the focus of farmers’ occupational health policy remains firmly fixed on safety rather than health. The aim of this study was to investigate the cardiovascular health status of a sub-group of Irish livestock farmers who participated in a workplace screening programme, with a view to leveraging support for an increased focus on health within the context of ‘occupational risk’ and farm policy.

Methods In total, 310 farmers participated in this cross-sectional study. Consent included permission to analyse farmers’ cardiovascular screening results, which included cholesterol and blood glucose levels, blood pressure, and anthropometric measurements. All data were entered into the SPSS (v22) for both in-depth descriptive and inferential statistical analysis.