08A.4 ASBESTOS EXPOSURE AND PROSTATE CANCER, REALLY?

Marie-Elise Parent*, M Hugues Richard. *INRS-Institut Armand-Frappier, Université du Québec, Laval, Canada*

10.1136/OEM-2019-EPI.190

Background General population exposure to asbestos from residential insulation and from environmental sources during childhood have recently been associated with prostate cancer. While asbestos fibers can be found in the prostate of workplace-exposed men at autopsy, few occupational studies have reported on asbestos exposure and prostate cancer incidence. We examined the association between lifetime occupational exposure to chrysotile asbestos and prostate cancer risk in a large population-based case-control study.

Methods Cases were 1933 men with histologically-confirmed incident prostate cancer, aged ≤ 75 years, diagnosed in 2005–2009 in Montreal. Concurrently, 1994 population controls from the same residential area and age distribution were randomly selected from electoral lists. In-person interviews elicited detailed socio-demographics, lifestyle and work histories. Industrial hygienists used job-specific information to provide semi-quantitative evaluations of intensity and frequency of exposure to 345 chemical agents, including asbestos, and a measure of confidence in the evaluation. Logistic regression was used to estimate odds ratios (OR) and 95% confidence intervals (CI) for prostate cancer risk associated with exposure to chrysotile asbestos.

Results After restriction to probable and definite exposure, and application of a 5 year lag, 12.5% of cases and 11.8% of controls were ever exposed to asbestos (OR=1.1, 95% CI 0.9–1.3). For duration of exposure, there was no increase in risk of overall prostate cancer in the lower tertiles of exposure but risk was elevated in the upper tertile (OR=1.6, 95% CI 1.2–2.2). Similarly, for cumulative exposure, risk was elevated in the upper tertile only (OR=1.5, 95% CI 1.1–2.1). Analyses considering tumor grades also showed a higher risk in the upper tertile of cumulative exposure for non-aggressive (OR=1.5, 95% CI 1.1–2.2) and especially aggressive (OR=1.9, 95% CI 1.2–3.0) cancers.

Conclusion Our findings are consistent with an increased risk of prostate cancer with prolonged and high cumulative exposure to chrysotile asbestos, and particularly for the aggressive form of the disease.

08A.5 TOTAL ENERGY EXPENDITURE AND RISK OF LYMPHOMA SUBTYPES: RESULTS FROM THE EUROPEAN EPILYMPH CASE-CONTROL STUDY

¹Pierluigi Cocco*, ¹Department of Medical Sciences and Public Health, University of Cagliari, Monserrato (cagliari), Italy; ²Catalan Institute of Oncology, Barcelona, Spain; ³German Cancer Research Center, Heidelberg, Germany; ⁴Department of Cancer Epidemiology and Genetics, Masaryk Memorial Cancer Institute and MF MU, Brno, Czech Republic; ⁵Dublin City University, Dublin, Ireland; ⁶Dijon University Hospital, Dijon, France; ⁷Medical Center, University of Freiburg, Freiburg, Germany; ⁸Department of Biomedical Sciences, University of Cagliari, Cagliari, Italy

10.1136/OEM-2019-EPI.191

Introduction Physical activity is known to convey protection against several cancers, but results on risk of lymphoma and

its subtypes have been inconsistent. A possible reason might be confounding by workplace exposures associated with occupational energy expenditure, which was not considered in studies of recreational physical activity. It is also unclear whether energy expenditure acts directly, or through preventing obesity.

Objectives To investigate the role of energy expenditure, including occupational and recreational physical activity, on risk of lymphoma subtypes.

Materials and methods Based on questionnaire information on lifetime recreational physical activity and lifetime occupational history available for all participants to the multicenter EpiLymph case-control study, we estimated energy expenditure at work by occupational ISCO68 code, and we applied it to the work histories of study subjects. We also categorized hours of lifetime recreational physical activity into quartiles. We calculated risk of lymphoma subtypes with unconditional polytomous regression analysis, associated with increasing categories of lifetime energy expenditure at work (EEW), increasing categories of recreational physical activity (RPA), and their interaction term (total energy expenditure, TEE), adjusting by age, gender, education, body mass index (BMI), and history of farm work and solvents use.

Results Risk of lymphoma overall, diffuse large B cell lymphoma and multiple myeloma was not associated with EEW, RPA and TEE. Risk of follicular lymphoma and chronic lymphocytic leukemia associated were elevated with medium and high EEW (OR 3.1, 95% CI 1.5–6.1; OR 2.5 95% CI 1.2–5.1, respectively), but there was not a significant upward trend.

Conclusions Further epidemiologic and mechanistic research is warranted to assess the role of physical activity in the etiology of lymphoma subtypes. New standardized energy expenditure assessment methods, as the ones herein developed, might contribute to a better understanding of the nature of the observed inconsistent findings.

Occupational Health Effects of Heat

08B.1 RISK OF HEAT RELATED ILLNESS IN LATINO AGRICULTURAL WORKERS: ENVIRONMENTAL TEMPERATURE AND ACTIVITY LEVELS

Marc Schenker*, Diane Mitchell, Tracey Armitage, Daniel Tancredi. *University of California at Davis, Davis, USA*

10.1136/OEM-2019-EPI.192

Introduction Farmworkers are at risk of heat related illness (HRI). The main contributors are thought to be environmental temperatures and activity levels, but the association has not been objectively assessed.

Methods California farmworkers were monitored for one work-shift each in the summers of 2014 and 2015. Interviewers recorded personal and demographic information. Wet bulb globe temperature (WBGT) was collected in minute intervals over the shift as were accelerometer activity data from each participant. This data was grouped into physiologically meaningful 15 min increments, with the average used for analysis. Data from the previous 15 min were used to predict current activity. Generalized Additive Modeling was used to determine the form of the association between WBGT and