Oral Presentation

Pesticides

0441 EXPOSURE TO DINITROANILINES AND RISK OF LUNG CANCER (LC) BY SUBTYPES: RESULTS FROM THE AGRICAN COHORT

^{1,2}Mathilde Boulanger*, ^{1,4}Séverine Tual, ^{1,4}Clémentine Lemarchand, ⁷Francim-Agrican group, ^{5,6}Isabelle Baldi, ^{1,2}Bénédicte Clin, ^{1,2}Pierre Lebaillly. ¹INSERM U1086, Caen, France; ²Université de Caen Normandie, Caen, France; ³Service de Pathologie professionnelle, CHU de Caen, Caen, France; ⁴Centre François Badlesse, Caen, France; ⁵ISPED, Laboratoire Santé Travail Environnement, Université de Bordeaux, Bordeaux, France; ⁶INSERM, ISPED, Centre INSERM U897 – Épidémiologie- Biostatistique, Bordeaux, France; ⁷Francim-Agrican group, France

10.1136/oemed-2017-104636.365

Introduction 2,6-Dinitroanilines included 15 herbicides, some of which are still used on a wide range of crops worldwide and in France, especially pendimethalin which was given special attention by the IARC. The aim of our analyses was to estimate the associations between LC and exposure to pendimethalin, benfluralin, butralin, ethalfluralin, nitratin, oryzalin, trifluralin -all once or still authorised in France-, in the French AGRiculture and CANcer (AGRICAN) cohort.

Methods More than 1 80 000 people affiliated for at least 3 years to the agricultural health insurance scheme were enrolled between 2005 and 2007. A total of 563 incident LC were identified from enrollment to 2011. Data on crop exposure during lifetime (13 crops, specific tasks including pesticide use) were collected. The evaluation of potential exposure to each dinitroaniline relied on a specific crop-exposure matrix, PESTIMAT. Analyses were adjusted on smoking history, involvement in cattle and horse breeding, peas growing, exposure to farming activities during childhood.

Results In the population, 16 533 people (11.2% of the cohort) were potentially exposed to one or more dinitroanilines. Pendimethalin and trifluralin were the most frequently used, but not associated to any increased risk of LC, nor was exposure to dinitroanilines in general. We observed an increased risk of adenocarcinoma for oryzalin exposure (HR=2.93[1.13–7.59], n=5 exposed cases), but with no linear effect with duration.

Conclusion We did not found any increased risk of LC among pendimethalin users. Our results suggest a possible association of lung adenocarcinoma with oryzalin, currently authorised in France, especially on the vineyard.

Poster Presentation

Neurological Effects

0442 OCCUPATIONAL EXPOSURES AND PARKINSONISM AMONG WOMEN TEXTILE WORKERS IN SHANGHAI, CHINA

^{1,2}Sindana Ilango, ³Wenjin Li, ⁴Caroline Tanner, ⁵Shu-Ching Hu, ³Roberta Ray, ⁶Susan Searles Nielsen, ⁷Dao Li Gao, ⁷Xin Wang, ⁸Sadie Costello*, ³David B Thomas, ¹Harvey Checkoway. ¹University of California, San Diego, San Diego, CA, USA; ²San Diego State University, San Diego, CA, USA; ³Fred Hutchinson Cancer Research Centre, Seattle, WA, USA; ⁴University of California, San Francisco, San Francisco, CA, USA; ⁵University of Washington, Seattle, WA, USA; ⁶Washington University in St. Louis, St. Louis, MO, USA; ⁷Zhong Shan Hospital Cancer Centre, Shanghai, China; ⁸University of California, Department of Environmental Health Sciences, Berkeley, CA, USA

10.1136/oemed-2017-104636.366

Objective To examine the association of endotoxin and other occupational exposures with parkinsonism (PS) severity and progression of PS signs.

Methods Movement disorder specialists examined 823 retired female textile workers ages 51–86 in Shanghai, China for PS prevalence and assessment of Unified Parkinson Disease Rating Scale motor subsection part 3 (UPDRS3). Most (n=669) were re-evaluated two years later. Occupational exposures to endotoxin, metals, solvents, magnetic fields, and shiftwork during a mean of 24 years working in the textile industry were assessed from detailed work histories and a job exposure matrix. We examined the association between each exposure and PS, severity (UPDRS3 score), and progression (annual change in UPDRS3) with multivariable regression models adjusting for age, smoking, and examiner.

Results We observed 39 prevalent PS cases and 784 non-cases. No association was observed between endotoxin and PS prevalence, disease severity, or disease progression. The other chemical occupational exposures and magnetic fields also had no associations with PS prevalence or disease severity. Shiftwork was marginally positively associated with disease progression. For each year of shiftwork as of the baseline exam, UPDRS3 score increased annually by an additional 0.047 (95% CI: -0.003, 0.097).

Conclusions We observed little evidence for an association between endotoxin and other occupational exposures with PS in this cohort of textile industry workers, although we are unable to rule out the possibility of clinically modest increases in progression among workers who had experienced several years of shiftwork.