

BRAZILIAN AGRICULTURAL WORKERS AND NON-HODGKIN'S LYMPHOMA: A DEATH CERTIFICATE CASE-CONTROL STUDY

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Background and aims: The use of pesticides in Brazil has been high compared to others countries of the world, and it is important assess the risk of diseases related to the use of this substance, particularly non-Hodgkin lymphoma (NHL) cancer, that has been closely associated with farm work. The aim of this study was to estimate the NHL mortality risk among agricultural workers between 1996 to 2005, in Brazilian southern states.

Methodology: Cases (n=1317) were the NHL deaths occurred between 1996 to 2005, for both men and women, which cause of death were obtained from the Brazilian Mortality Information System (SIM/SUS), classified according to ICD-10 aged between 20 to 69 years old, living in the states of Parana, Santa Catarina and Rio Grande do Sul, in non-urban municipalities (classified according to the IBGE - Brazilian Institute of Geography and Statistics). Controls (n = 2634) were paired by sex, age, year of death and residence state, which the underlying cause of death had not included cancer (ICD10 - C00 - D48) or hematologic disease (ICD10 D 50 -- D89). Occupational data were obtained from the SIM/SUS.

Results: An increased NHL death risk was observed among the agricultural workers aged 20 to 39 years (OR = 1.55 CI95%: 1.10-1.87) compared to non-agricultural workers. In adjusted analysis, there was observed an increased NHL death risk among agricultural workers aged 20 to 39 years (OR =2.06 CI95%: 1.20 – 3.14) compared to non-agricultural workers. Stratification by sex showed that magnitude of non-Hodgkin lymphoma mortality risk was higher for male agricultural workers (OR: 1.31 CI95%: 1.10-1.92) than for female ones (OR: 1.17 CI95%: 1.12-1.80).

Conclusion: Our results suggest that the agricultural workers residents in the South are more likely to die by NHL compared to non-agricultural workers.