

Long driving time is associated with haematological markers of increased cardiovascular risk in taxi drivers

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摘要

Abstract

AIMS: To examine the association between driving time and changes in haematological markers of increased risks for cardiovascular diseases (CVD). **METHODS:** The authors conducted a cross sectional analysis of baseline data from the Taxi Drivers' Health Study cohort in Taipei, Taiwan. They retrieved information on comorbidity, laboratory tests, age, and anthropometric measures from medical records of 1157 subjects (mean age 44.6 (SD 8.6) years). Whole blood cell (WBC) count was used as the primary haematological marker for increased CVD risk, and platelet count and haematocrit as the secondary markers. Standardised questionnaires were implemented to collect information on demographics, lifestyle, work related physical and psychosocial factors, and driving time profiles. Multiple regression was used to estimate the adjusted effects of driving time on three haematological markers. **RESULTS:** The mean measured hematological marker was 6656 (SD 1656) cells $\times 10^6/l$ for WBC, 47.2 (SD 3.5) % for hematocrit, and 243 (SD 52) cells $\times 10^9/l$ for platelets. The driving time was 264 (SD 76) hours/month. Compared with drivers who drove $<$ or $=$ 208 hours/month (1st quartile cut off), drivers who drove $>$ 208 hours/month had a higher WBC count (by 317 $\times 10^6/l$; 95% CI 99 to 535), haematocrit (by 0.8%; 95% CI 0.3 to 1.2), and platelets (7.9 $\times 10^9/l$; 95% CI 1.0 to 14.8). After adjusting for conventional CVD risk factors (age, sex, smoking, hypertension, diabetes, and hypercholesterolaemia), obesity, alcohol drinking, regular exercise, and sociodemographics (education, marital status, income, and so on), long driving time was still associated with significant increases in WBC and platelets, whereas the effect on haematocrit was diminished and became statistically non-significant. Additional controls for physical workload, self-perceived job stress, and job dissatisfaction did not alter the associations with increased WBC and platelets. **CONCLUSIONS:** Longitudinal studies are needed to confirm the observed cross sectional association and to further examine the specific occupational exposures accountable for the association between driving time and haematological markers of systemic inflammation and haemostatic alteration.