Traffic Accident Risks Associated with the Prescription of Antidepressants: A Registry-based Cohort Study

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Several experimental studies have shown that both depression itself and the use of antidepressants can impair ability to drive a motor vehicle. Population-based studies have been inconclusive.

The aim of the present study was to examine whether the use of antidepressants by drivers increases the risk of being involved in traffic accidents.

Between January 2004 and September 2006, information on prescriptions, road accidents and emigrations/deaths was obtained from three Norwegian population-based registries. Data on people between the ages 18 - 70 (3.1 million) were linked for the three databases using the unique 11-digit identification number assigned to all individuals residing in Norway. Exposure consisted of receiving prescriptions for antidepressant use. Standardized incidence ratios (SIR) were calculated by comparing the incidence of accidents during time exposed (e.g. for the first seven days after filling a prescription) with the incidence over the time not so exposed.

Sedating antidepressants (tricyclic antidepressants, mianserin and mirtazapine) were studied together as one group and newer non-sedating antidepressants (SSRIs, moclobemide, venlafaxine and reboxetine) as another. The SIR was calculated for the overall study population, as well as stratified by age groups and genders.

22,405 road accidents with personal injuries occurred during the study period including 133 with exposure to antidepressants. The traffic accident risk did not increase for drivers who had received prescriptions for sedating antidepressants (SIR 1.1; 95% CI: 0.7 - 1.6), but only for drivers receiving non-sedating antidepressants (SIR 1.8; 1.5 - 2.2). The SIR estimates for male drivers were higher than for female drivers, and higher for middle aged (35 - 54 years of age) than for older drivers. SIR estimates did not change substantially for different time periods after dispensing of the prescription, for concomitant use of other impairing drugs, or for new users.

There was an increased risk of being involved in a traffic accident after having received a prescription for non-sedating newer antidepressants, but not for older, sedating antidepressants. The increase was modest, not higher than what has been seen for receiving any drug (SIR 1.7; 1.6 - 1.8). Further analysis will be presented to investigate whether the increased accident risk was due to the antidepressants themselves, to co-medication or to the disease itself (confounding by indication). Time of day for accident and probable drug intake will also be discussed.

Keywords: Antidepressants, Traffic accident risk