Reduction in motor vehicle collisions following treatment of sleep apnoea with nasal CPAP.

George CF.

University of Western Ontario, London Health Sciences Centre, 375 South Street, London, Ontario N6A 4G5, Canada. cgeorge@uwo.ca

BACKGROUND: Patients with untreated obstructive sleep apnoea (OSA) have increased motor vehicle collisions (MVCs). When successfully treated, they report improved driving and fewer mishaps, but there are few objective data to confirm this. A study was therefore undertaken to examine actual MVC data in a large group of patients with OSA before and after treatment with continuous positive airway pressure (CPAP) compared with a control group matched for age, sex, and type of driver's licence (commercial or non-commercial). METHODS: Two hundred and ten patients of mean (SD) age 52 (11) years, body mass index (BMI) 35.5 (10) kg/m(2), apnoea/hypopnoea index (AHI) 54 (29) events/h were treated with CPAP for at least 3 years. MVC records were obtained from the Ontario Ministry of Transportation (MTO) database for patients and an equal number of randomly selected control drivers. MVC rates were compared for 3 years before and after CPAP therapy for patients and for the corresponding time frames for controls. RESULTS: Untreated patients with OSA had more MVCs than controls (mean (SD) MVCs/driver/year 0.18 (0.29) v 0.06 (0.17), p<0.001). Following CPAP treatment the number of MVCs/driver/year fell to normal (0.06 (0.17)) while, in controls, the MVC rate was unchanged over time (0.06 (0.17) v 0.07 (0.18), p=NS). Thus, the change in MVCs over time between the groups was very significant (change = -0.12 (95% CI -0.17 to -0.06), p<0.001)). The MVC rate in untreated patients (n=27) remained high over time. Driving exposure was not different following CPAP. CONCLUSIONS: The risk of MVCs due to OSA is removed when patients are treated with CPAP. As such, any restrictions on driving because of OSA could be safely removed after treatment.