Alcohol and drugs in seriously injured drivers in six European countries - DTU Orbit

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The objective of this study was to determine the presence of alcohol and drugs in drivers severely injured in traffic crashes in six European countries. Data were collected from 2492 seriously injured drivers of cars and vans in Belgium, Denmark, Finland, Italy, Lithuania, and the Netherlands, between 2007 and 2010. Toxicological analysis was performed with chromatographic techniques on whole blood for 23 substances. The percentage of drivers positive for at least one psychoactive substance ranged between 28% (Lithuania) and 53% (Belgium). Alcohol (≥0.1 g/L) was the most common finding with the highest percentage in Belgium (42.5%). Among the alcohol-positive drivers, 90.5% had a blood alcohol count (BAC) ≥0.5 g/L and 65.7% had a BAC ≥1.3 g/L. Benzodiazepines (0.0–10.2%) and medicinal opioids (0.5–7.8%) were the most prevailing medicinal drugs, but half of the concentrations were lower than therapeutic. Cannabis (0.5–7.6%) was the most prevailing illicit drug. Alcohol was found in combination with drugs in 2.3–13.2% of the drivers. Drug combinations were found in 0.5–4.3% of the drivers. This study confirms the high prevalence of psychoactive substances in injured drivers, but we observed large differences between the participating countries. Alcohol was the most common finding, followed by cannabis and benzodiazepines. Notable are the many drivers having a BAC ≥1.3 g/L. The majority of the substances were found in combination with another psychoactive substance, mostly alcohol. The high prevalence of high BACs and combinations (compared to roadside surveys) suggest that those drivers are most at risk and that preventive actions should target them preferentially.

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