

Traffic Accidents with Fatally Injured Drivers in Southwestern Croatia

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ABSTRACT

Traffic accidents represent a significant cause of death in Croatia, therefore being an important social and public-health problem. The aim of our study was to analyze the forensic characteristics of traffic accidents with fatally injured drivers in Southwestern Croatia. Study population included 277 fatally injured drivers, in a 10 year period (between 1994 and 2004). As for the gender, 92% were male and only 8% were female. The median age was 35 (13–86), with 53% of them aging 20–39, therefore being a part of the working population. Most of the accidents happened during the summertime (44%) and weekend (57%). Half of the fatally injured drivers (139) were sober (0.00 g/kg) and only 10 % (28) had blood alcohol level of 0.00–0.5 g/kg. Our results suggest that, as opposed to the current public opinion in Croatia, alcohol might not be the only crucial factor contributing to the drivers' mortality in Croatia. As for the prevention measures, other factors (drug intoxication, fatigue...) should also be taken into consideration and further studied.

Key words: drivers, traffic accident, Croatia

Introduction

Traffic accidents represent a significant cause of death in Croatia, therefore being an important social and public-health problem. This is even more emphasized by the fact that most of the people dying and/or being injured in traffic are younger middle-aged members of active working population^{1–4}, especially having in mind the difficult demographic situation in Croatia and the consequences of the relatively recent Independence war.

The aim of our study was to analyze the forensic characteristics of traffic accidents with fatally injured drivers in Southwestern Croatia.

Materials and Methods

The Rijeka Institute of Forensic Medicine covers the area of 7,993 km² with the population of 322,964 people mostly living in the city of Rijeka, as a regional center.

Study population included 277 fatally injured drivers, in a 10 year period (between 1994 and 2004), with an autopsy or body examination performed at the Rijeka Institute of Forensic Medicine.

Results and Discussion

Almost 40% (110) of them died in the last 3 years of the study period (2002–2004). As for the gender, 92% were male and only 8% were female. The median age was 35 (13–86), with 53% (147) of them aging 20–39, therefore being a part of the working population.

Most of the accidents (44%, 121) happened during the summertime (June to September), probably due to an increase in the number of vehicles. On the contrary, during the Carnival season (January and February), which is traditionally known as the period of an increased alcohol consumption, the incidence was much lower.

More than a half of the accidents (57%, 159) happened during the weekend, mostly Friday. The highest incidence of the accidents was recorded during the early afternoon (12 a.m. to 4 p.m.), while less than 25% happened during the night (11 p.m. to 5 a.m.). Most of the vehicles involved were cars (68%), followed by the motorcycles (23%).

Half of the fatally injured drivers (139) were sober (0.00 g/kg) and only 10 % (28) had blood alcohol level of 0.00–0.5 g/kg. As for the direct cause of death, found on

autopsy, 49% (138) were multiple injuries, followed by head injuries with 23% (63).

In order to lower the traffic mortality, well targeted and planned prevention measures are necessary. Some authors point out the potential high-risk groups of drivers: young and inexperienced^{5,6}, elderly ones^{7–9}, female drivers^{7,10}, male drivers¹¹ etc. There are also many studies on the influence of alcohol consumption^{12,13} and drug intoxication^{13,14} on traffic mortality, as well as regarding

legislation^{14,15}. There are also studies emphasizing night-driving¹⁶, fatigue^{17,18} and weather conditions¹⁹ as important contributing factors to fatal traffic accidents.

Our results suggest that, as opposed to the current public opinion in Croatia, alcohol might not be the only crucial factor contributing to the drivers' mortality in Croatia. As for the prevention measures, other factors (drug intoxication, fatigue...) should also be taken into consideration and further studied.

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PROMETNE NEZGODE SA SMRTNO STRADALIM PJEŠACIMA U JUGOZAPADNOJ HRVATSKOJ

SAŽETAK

Prometne nezgode imaju značajan udio u smrtnosti u Hrvatskoj, čineći tako važan socijalni i javnozdravstveni problem. Cilj naše studije bio je analizirati forenzičke karakteristike prometnih nezgoda sa smrtno stradalim vozačima u jugozapadnoj Hrvatskoj. U studiju je uključeno 277 smrtno stradalih vozača u desetogodišnjem periodu (1994–2004). U odnosu na spol, 92% su činili muškarci, a svega 8% žene. Srednja dob bila je 35 (raspon 13–86), uz 53% smrtno stradalih vozača u dobi od 20–39 godina, dakle pripadnika radno aktivne populacije. Većina nezgoda dogodila se tijekom ljeta (44%) i vikendom (57%). Polovica smrtno stradalih vozača (139) bila je trijezna (0,00 g/kg), a svega 10% (28) su imali između 0,00 i 0,5 g/kg alkohola u krvi. Naši rezultati sugeriraju da, suprotno trenutnom javnom mišljenju u Hrvatskoj, alkohol možda nije jedini ključni čimbenik u odnosu na smrtnost vozača u Hrvatskoj. U odnosu na preventivne mjere, ostali čimbenici (opojne droge, umor...) trebalo bi također uzeti u temeljito razmatranje.