



### **G26 The Methods of Committing and Alcohol Intoxication of Suicides in the Southwestern Croatia From 1996 to 2005**

*Alan Bosnar, MD, PhD\*, Valter Stemberga, MD, Miran Coklo, MD, and Sanja Dobi Babic, BSc, Department of Forensic Medicine, Rijeka University School of Medicine, B. Branchetta 20, Rijeka, 51000, Croatia; and Emina Grgurevic, MD, Public Health Institute of Primorsko-Goranska County, Kresimirova 52a, Rijeka, 51000, Croatia*

After attending this presentation, attendees will understand the relationship between alcohol intoxication and the choice of suicide method in the Southwestern Croatia from 1996 to 2005.

This presentation will impact the forensic community and/or humanity by through the contribution to a better understanding of the relationship between alcohol intoxication and the choice of suicide method, and by pointing towards efficiency of specific suicide prevention measures in specific methods of committing suicide.

This study was undertaken to determine if the level of alcohol intoxication and the choice of specific methods of committing suicide are related.

Suicides in the Southwestern Croatia in a ten year period, especially regarding the method of committing and alcohol intoxication, were analyzed. The examined region has an area of 7,993 km<sup>2</sup> with the population of 322,964, mostly living in the city of Rijeka, as a regional center.

In the examined period, 512 suicides were recorded, with 367 male and 154 female victims. The average age of male victims was 50.81 years, while female victims were older with the average age of 56.02 years. Ten various methods of committing suicide were recorded, with hanging as the most frequent (34%), followed by jumping from height (17%), firearms (15%), poisoning (14%), drowning (10%), jumping under/in front of a train (4%), explosive devices (4%), cutting/stabbing (1.2%), electrocution (0.4%) and self-immolation (0.4%). The average blood alcohol concentration at the moment of suicide was 0.68 g/kg with male, and 0.29 g/kg with female victims. The highest blood alcohol levels at the moment of suicide were recorded with suicides by explosive device (with the average blood alcohol concentration of 1.71 g/kg), while the lowest concentrations were recorded with female hanging suicides (with the average blood alcohol concentration of 0.0153 g/kg) and male cutting/stabbing suicides (with the average blood alcohol concentration of 0.103 g/kg).

This study suggests that the alcohol consumption before committing suicide is more significant in cases of suicide with an explosive device than in the other methods of suicide. This especially drastic method of suicide was rare in Croatia in a period prior to the Croatian Independence War (1991-1995), but its incidence significantly increased during the war and in a post-war period. These victims were not chronic alcoholics, but they consumed excessive alcohol as a result of psychiatric disorders as a consequence of war stress they suffered. This study showed that increased alcohol consumption in Croatia is more closely associated with certain methods of suicide over other methods.

**Suicide, Alcohol, Croatia**