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Impact of alcohol abuse after major non-cardiac surgery and post-operative cognitive dysfunction

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Introduction: Patients who misuse alcohol may be at increased risk of surgical complications and poorer function following hip replacement. The goal of this study was to determine whether neuro-cognitive function is impaired after non-cardiac surgery during general anesthesia in older patients with a history of alcohol abuse.

Methods: Prospective study included 220 patients, male and female, triaged into three groups, with ASA levels I-IV. Subjects 55 years of age and older, with self-reported alcohol abuse and age-, sex-, education-matched non-alcoholic controls were tested using a neurocognitive battery before and 2 weeks after elective surgery or a corresponding time interval without surgery. Verbal memory, visuo-spatial memory and executive functions were assessed. From the total number of participants involved in the study, 135(67.5%) patients belonged to ASA III. Among all patients, 168(84%) patients were chronic alcohol users.

Results: Pearson's χ^2 test showed a statistically significant difference in regard to the use of alcohol ($\chi^2=19.220$, $df=1$, $p=0.000$, $p<0.05$). Significant three-way interactions (analysis of variance) for visual immediate recall, visual delayed recall, semantic fluency, phonemic fluency and the color-word stroop test implied that cognitive performance in the alcoholic group decreased after surgery.

Conclusion: In the study by Mason SE, which involved 255 elderly patients that were post-operatively admitted to the intensive care unit following a major abdominal surgery, development of POCD was two times greater in urgent cases (~ 40% of cases), when compared to elective interventions. Our results complement the data given by the World Health Organization and results of similar studies.

Biography

Ljiljana Gvozdenovic has completed her MD and PhD from University of Novi Sad School of Medicine. She specialized in the field of Anesthesiology and works at the Clinical Center of Vojvodina. She is a full time Professor at the Department of Surgery, School of Medicine in Novi Sad. She has published over 300 research papers and 22 monographies. She is a Co-author in 6 medical textbooks and Editor of a Serbian medical journal, "Medicina Danas". She is a Member of the European Society of Intensive Care Medicine, European Association of Trauma and Emergency Surgery and Serbian Academy of Medical Sciences.

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