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CARFENTANIL RELATED DEATHS IN VILNIUS REGION 2014-2019: AN OVERVIEW ON A GROWING PROBLEM

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Introduction: Carfentanil is a synthetic opioid analog of fentanyl. There is insufficient research regarding this drug's effect on humans as it's approved only for use in veterinary medicine. However illicit use of carfentanil for recreational purposes is increasing every year. More attention should be brought to this substance as it is very potent and poses serious personal and public health risks.

Methods: A retrospective study was performed using postmortem investigation data (full autopsies and toxicological analyses) obtained from Lithuanian State Forensic Medicine Service database. From 239 analysed cases of drug overdose in years from 2014 to 2019, 20 patients had carfentanil in their system. Those 20 cases were selected for further analysis. Data was processed using R Commander.

Results: All 20 analyzed deceased were adults aged from 24 to 67 years old, 12 of them male and 8 female. The mean age of decedents was 36,6. In 2014 only 1 case of carfentanil use was encountered however the number of cases increased each year until it peaked in 2018 (8 cases). Exact concentration of the substance was possible to evaluate in 6 decedents and it was 3.83 ng/ml on average but in other cases only traces of carfentanil were detected. In all cases some other psychoactive substance or a combination of them were also found (diphenhydramine – in 17, morphine – in 6, metadon – in 4 cases). In 10 cases alcohol was found in blood and urine (average concentration in blood - 1.12 ‰)

Conclusions: A growing number of carfentanil use cases during 2014-2019 period was observed. Carfentanil was found to be used in combination with other psychoactive substances, namely diphenhydramine, alcohol, morphine and metadon. Further research of how carfentanil affects human body is needed.

Keywords: carfentanil, drugs, opioids, overdose, autopsy