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PRE-HOSPITAL TREATMENT OF ACUTE POISONINGS BY AMBULANCES IN YEKATERINBURG, RUSSIA

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Background: Large, prospective pre-hospital studies of acute poisonings are scarce. We present the epidemiology of the pre-hospital poisonings, the treatment given, the complications occurring from both the poisoning itself and the treatment, as well as the predictors for hospitalisation in a large industrial Russian city. The safety of the present approach is also discussed towards the current common practice.

Methods: Data was collected from March 2009 to March 2010. All adult (≥16 years) acute poisonings in the city of Yekaterinburg, Russia were included consecutively in an observational pre-hospital study. Multivariate logistic regression analysis was used to identify the factors associated with hospitalisation of the patients.

Results: In total, 1795/2536 (71%) were brought to hospitals, 736/2536 patients (29%) were discharged by the ambulance, and 5/2536 (0.2%) died on scene. The most frequent main agents taken were opioids (25%), ethanol (9%), benzodiazepines (8%), corrosive substances (7%), carbon monoxide (5%) and neuroleptics (5%). Overall, pre-hospital treatment was given to 1855/2536 (73%) of the patients: 79 cases (3%) were intubated, and antidotes were given in 678 cases (28%) . Intravenous fluids were given to 612 patients, but among the patients with hypotension or circulatory failure, 29/130 (22%) did not receive any fluids. Gastric lavage was performed in 852 patients (34%), but only 174/852 (20%) within the first hour after ingestion: 31% had a GCS<15, but only 5% of them were intubated in the ambulance. Gastric lavage was also performed in 113/ 177 (64%) of the patients poisoned by corrosives. A suicidal behaviour was the strongest predictor for hospitalisation.

Conclusion: This study reveals current practice differing from the common treatment practice, especially concerning the use of gastric lavage. Whether the current practice led to an increased morbidity and mortality is uncertain, but it justifies the need for thorough evaluation of clinical practice. These findings highlight the importance of studies like the present to improve diagnostics, triage, and treatment in acute poisonings.