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188. Treatment of Severe Alcohol Withdrawal, a Cross- Sectional Study of the Toxicology Investigators Consortium Database

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Background: There is no consensus standard of care in escalation of therapeutic agents for the treatment of severe alcohol withdrawal. We sought to quantify medications used by medical toxicology services to treat severe alcohol withdrawal and describe patient outcomes by treatment group.

Methods: In this cross-sectional study, we queried the Toxicology Investigators Consortium database for patients with alcohol withdrawal that received phenobarbital, dexmedetomidine, or ketamine from November 2020 – May 2023. We used descriptive statistics to report therapeutics administered and patient outcomes of intubation/ventilator support and death for each treatment group. We compared outcomes of the most common treatment strategies, benzodiazepines plus phenobarbital versus phenobarbital monotherapy.

Results: We identified 1,017 patients that received one of the designated medications. Phenobarbital plus benzodiazepines were used to treat 555 patients (51%) and phenobarbital monotherapy was used for 391 (36%). We found no significant difference in the frequency of intubation (difference in proportions 1.0%, 95% CI -1.9 to 3.8) or death (difference in proportions 0.9%, 95% CI -0.1 to 1.9) between these groups. Multiple combinations of phenobarbital, benzodiazepines, dexmedetomidine, or ketamine were used. Statistical analysis of different combination therapies was not pursued due to multiple groups with a very small number of patients. A total of 60 patients (6%) received dexmedetomidine and 19 patients (2%) received ketamine. Twenty-one patients (35%) treated with dexmedetomidine and seven patients (37%) treated with ketamine received ventilator support. No patients treated with dexmedetomidine or ketamine died. Four patients were treated with dexmedetomidine mono- therapy; one of these patients received ventilator support.

Conclusion: Variations in the selection of agents to treat severe alcohol withdrawal exist among toxicologists, with benzodiazepines and phenobarbital being the most commonly used agents. We found no significant difference in the number of intubations or deaths between patients receiving phenobarbital plus benzodiazepines and those receiving phenobarbital alone.