133. Severe Outcomes Following Pediatric Cannabis Intoxications: A Prospective Cohort Study of an International Toxicology Surveillance Registry

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Background: An increasing number of states have legalized recreational cannabis for adult use.

Question: What are the risk factors of severe outcomes, including intensive care unit (ICU) admission or in-hospital death, in children who present to the emergency department (ED) with cannabis intoxication?

Methods: In this prospective cohort study we collected data on all pediatric patients (0–18 years) who presented with cannabis intoxication from August 2017 through June 2020 to the Eds of participating sites in the Toxicology Investigators Consortium (ToxIC), a multi-center registry of poisoned patients who receive a bedside consultation by medical toxicology services. In cases which involved polysubstance exposure, patients were included only if cannabis was a significant contributing agent. We collected relevant demographic, clinical, management, disposition, and outcome data. We conducted a multivariable logistic regression analysis to explore predictors of severe outcome. The primary outcome was a composite severe outcome endpoint, defined as ICU admission or in-hospital death. Covariates included relevant sociodemographic and exposure characteristics.

Results: One hundred and thirty-eight pediatric patients presented to a participating ED with cannabis intoxication and comprise the study cohort. There were 75 males (54%), median age was 14.0 years (IQR 3.7-16.0). Among 138 patients, 52 (38%) were admitted to ICU and/or died (n<5) during hospital stay. In the multivariable logistic regression analysis, polysubstance ingestion (adjusted odds ratio [aOR] = 10.5, 95% CI: 3.2-34.3; P<0.001) and cannabis edibles ingestion (aOR = 4.1, 95% CI: 1.6-10.7; P=0.003) were strong independent predictors of severe outcome.

Conclusion: Pediatric patients that presented to ED with cannabis intoxication and had polysubstance intoxication or have ingested cannabis edibles had 10.5- and 4.1- higher odds of severe outcomes, respectively, than those without these characteristics. Prevention efforts should target these risk factors to mitigate poor outcomes in intoxicated children.