

01. Characteristics of Toxic Exposures in HIV-Positive Patients Reported to the Toxicology Investigators Consortium

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Background: Most research regarding toxic exposure and HIV-positive patients addresses overdose only in the setting of drug abuse. Little has been previously reported regarding characteristics of exposure outside of the drug abuse setting. In 2015, the ToxIC registry added an optional data field regarding HIV status.

Research question: What are the encounter types and agents of exposure in HIV-positive patients?

Methods: This is a prospective study performed using multi-center data collected in the ToxIC Registry from January 1, 2015 to August 31, 2017. All known HIV-positive patients were included. Descriptive statistics were used to report the types and frequency of exposure. We also report the top five agent classes and agents associated with exposure.

Results: There were a total of 21,504 cases reported to the registry during this time. HIV status was known in 1151 cases, and of these, 206 (18%) were HIV-positive. The top encounter types in HIV-positive patients are intentional pharmaceutical (48.1%), intentional non-pharmaceutical (28.1%), opioid withdrawal (5.3%), organ system dysfunction (4.4%), and unintentional pharmaceutical (2.9%). For intentional pharmaceutical, 65.6% are due to self-harm, 18.2% for misuse/abuse, and 11.1% for therapeutic use. For intentional non-pharmaceutical, 67.2% are misuse/abuse. The top five agent classes are sympathomimetics (20%), antidepressants (18.9%), opioids (17.1%), analgesics (14.3%), and sedhypnotic/muscle relaxants (13.1%). The top five agents are methamphetamine (10.2%), ethanol (9.7%), heroin (9.1%), acetaminophen (8%), and cocaine (6.3%).

Discussion: Drugs of abuse were highly represented among agents of exposure in HIV-positive patients. In comparison, the exposure for the same agents in all-comers in the 2016 ToxIC registry annual report were methamphetamine (2.1%), ethanol (8.1%), heroin (3.7%), acetaminophen (11.6%), and cocaine (2.9%). The top five agents of exposure in the 2016 report were acetaminophen, ethanol, diphenhydramine (4.9%), heroin, and quetiapine (3.6%). A limitation of our study is that 85% of patients in the ToxIC registry had unknown HIV status.

Conclusion: Most encounters in HIV-positive patients are due to intentional pharmaceutical and non-pharmaceutical exposures. The most frequently reported agents of exposure are methamphetamine, ethanol, heroin, acetaminophen, and cocaine.