

313. Characterization of acute opioid overdose in the ToxIC Registry

Katherine L Boyle , Lynn A Farrugia , Jennifer L Carey , on behalf of the ToxIC Consortium
University of Massachusetts Medical School, Worcester, USA

Objective: The abuse and misuse of prescription opioid analgesics in the USA has risen steeply over the past decade. Trends among gender differences and age groups are described in National Survey data, however, it is self-reported and only includes intentional abuse. Our objective was to compare characteristics of patients reported in the American College of Medical Toxicology 's Toxicology Investigator's Consortium (ToxIC) database following opioid overdose. ToxIC is a prospective online registry developed in 2009; currently 46 institutions participate by entering data on bedside consults by medical toxicologists. **Methods:** This is a retrospective review of opioid overdoses reported to the ToxIC database. All intentional and unintentional pharmaceutical encounters between 1 October 2010 and 1 November 2014 were reviewed. All cases that listed opioids as a primary agent in the ingestion were included for analysis.

Results: Within the study period 4,818 cases were classified as intentional and 696 cases as unintentional pharmaceutical encounters. Opioids were listed as the primary agent in 553 (11%) of intentional and 58 (8%) of unintentional cases. In the intentional group, the top five agents were oxycodone (n=148 cases, 27%), methadone (n=91, 16%), hydrocodone (n=80, 14%), tramadol (80, 14%) and heroin (n=41, 7%). Of the unintentional overdoses, the most common agents were buprenorphine (n=16, 28%), oxycodone (n=12, 21%), methadone (n=9, 15%), morphine (n=6, 10%) and tramadol (n=5, 9%). Naloxone was administered to 26 patients in the unintentional category and 203 in the intentional overdose category (44.8% versus 36.7% p

0.22). Males accounted for 305/611 (50%) and females for 306/611 (50%) of opioid encounters overall. Of intentional cases 279 (50%) were males, and 274 (50%) were females. For unintentional overdoses, males accounted for 26 (45%) and females 32 (55%) of cases. The majority of intentional overdoses (483/553, 87%) occurred in adult patients (age greater than 18 years). However, most unintentional exposures were in children less than 7 years of age (34/58, 59%).

Conclusion: The most common opioid encountered in overdose was oxycodone (26% of all cases). There was no significant difference in naloxone use between intentional and unintentional overdoses in this dataset. More than half of unintentional overdoses occurred in patients 6 years of age and under (34/58, 59%); this emphasizes the importance of overdose prevention targeted towards this age group. Opioid overdose reported in the ToxIC database provides important details including types of pharmaceuticals, user demographics and intent and need for treatment. This information can be used to target at risk populations for prevention programs.