

126. Prescription Opioid Abuse or Misuse in Pregnancy Using Poison Center Data

Brandon Warrick^a, K. Sycamore^b, B. D. Holbrook^b, Susan Smolinske^b, Steven Seifert^b, Gabrielle Bau^c, B. Bucher Bartelson^c, S. G. Severtson^c, J. L. Green^d and R. C. Dart^e

^aNew Mexico Poison and Drug Information Center; ^bNew Mexico Poison and Drug Information Center, University of New Mexico Health Sciences Center); ^cRocky Mountain Poison and Drug Center - Denver Health; ^dRocky Mountain Poison and Drug Center, Denver Health; ^eRocky Mountain Poison and Drug Center, Denver Hospital Health Authority

Background: The prescription opioid epidemic is a significant public health problem that affects all segments of the United States population. One particularly vulnerable population is pregnant women. In this analysis, we compared intentional abuse and misuse exposure pregnant female cases reported to poison centers to non-pregnant female controls to understand differences in opioid exposures.

Methods: The Researched Abuse, Diversion, and Addiction Related Surveillance (RADARS) System collects data from multiple programs to assess prescription drug abuse, misuse and diversion. A retrospective matched case-control study was conducted with intentional abuse or intentional misuse exposures between the ages 15 years to 45 years who reported a prescription opioid to a participating poison center between January 2005 and September 2015. Confirmed non-exposures and death by an indirect report were excluded. Cases were pregnant women who were matched to three non-pregnant female controls on year, poison center, and age (treated as categorical by decades). Pregnant women who did not have three matches were excluded (n = 3). Exposure frequencies for active pharmaceutical ingredients (API; oxycodone, fentanyl, hydrocodone, hydromorphone, morphine, oxymorphone, methadone, buprenorphine, tramadol) were compared for pregnant women and non-pregnant women using conditional logistic regression.

Results: 304 cases and 912 matched controls were analyzed. Teenagers represented 9.2% of the population; the majority were in their twenties (65.5%), followed by 23.7% in their thirties and 1.6% in their forties. Table 1 below displays the percentage of cases and controls exposed to each API. The odds of intentionally misusing or abusing an API differed among pregnant vs. non pregnant for two of the APIs: For hydrocodone, the odds among pregnant women was 1.65 (95% CI 1.25 to 2.18) times the odds among non-pregnant women whereas the odds for tramadol among pregnant women was 0.33 (95% CI 0.20 to 0.52) times the odds among non-pregnant women.

Conclusions: In this matched case-control study, pregnancy status was associated with an increased risk of hydrocodone abuse/misuse and lower risk of tramadol abuse/misuse after matching on year, poison center, and age.

	Statistics	Non-pregnant N = 912	Pregnant N = 304	p-value
Oxycodone	N (%)	213 (23.4)	83 (27.3)	0.153
Hydrocodone	N (%)	341 (37.4)	147 (48.4)	<0.001
Tramadol	N (%)	172 (18.9)	22 (7.2)	<0.001
Methadone	N (%)	88 (9.6)	32 (10.5)	0.651
Buprenorphine	N (%)	69 (7.6)	26 (8.6)	0.564
Morphine	N (%)	34 (3.7)	9 (3.0)	0.523
Fentanyl	N (%)	33 (3.6)	4 (1.3)	0.050
Hydromorphone	N (%)	22 (2.4)	6 (2.0)	0.658
Oxymorphone	N (%)	14 (1.5)	3 (1.0)	0.482

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 brandonwarrick@salud.unm.edu

127. Two PINACAs, multiple patients: A backcountry EMS mass casualty requiring air and ground transport

Nicklaus Brandehoff^a, Michael Darracq^a, Jirair Gevorkyan^b, Shane Clark^c, Bryan Kaye^a, Robert Torres^b, Eric Schmitt^a and Patil Armenian^a

^aUniversity of California, San Francisco (UCSF)-Fresno; ^bCentral Valley Toxicology; ^cSkylife Air Ambulance

Background: Synthetic cannabinoid (SC) use and toxicity including seizure, agitation, and death has surged in the last few years. SCs pose challenges in the emergency department (ED) and in laboratory analysis, complicated by an ever-changing array of compounds. An as-yet unreported challenge is the prehospital triage and treatment of SC intoxication. We describe an SC mass casualty incident (MCI) in the backcountry requiring helicopter emergency medical services (HEMS) and transport to multiple local EDs.

Case Report: Six previously healthy male prison inmates (age 28-59 years) working as seasonal forest firefighters in the California Sierra Nevada wilderness smoked cigarettes containing "spice" and required emergency medical services (EMS) evaluation. Four patients had tonic-clonic seizures and were transported by HEMS; three required prehospital intubation. A fifth altered patient with abnormal vital signs received ground transport. A sixth altered patient with normal vital signs was transported by private vehicle. A 7th patient required HEMS transport the following night after smoking a remaining cigarette butt. Patients were evaluated at 3 local EDs. All patients were discharged same day or day after presentation without complication. Biological specimens from 5 patients were obtained for testing with liquid chromatography-time-of-flight-mass spectrometry (LC-TOF/MS) (TOF 6230- LC1200, Agilent). Results from 2 patients showed the presence of AB-PINACA, its metabolite AB-PINACA pentanoic acid, ADB-PINACA, and its metabolite ADB-PINACA pentanoic acid.

Case Discussion: AB-PINACA and ADB-PINACA are indazole-based SCs recently placed into Schedule I classification with very limited toxicity reports. Intoxication by a combination of these two compounds has not yet been reported in the medical literature. These SCs, causing simultaneous toxicity in multiple patients, created logistical challenges for EMS. The initial call was for 1 patient. Due to the remote location, EMS contact took 1 hour. On arrival, EMS learned of 5 more patients and that helicopters had been deployed at request of on-site correctional officers. The first EMS crew set up incident command to coordinate and triage. The closest landing zone was 45 minutes away with no radio contact available between HEMS and EMS. Communication occurred via intermittent cell phone contact with frequent signal loss. One HEMS crew went to the incident site to triage helicopter resources; 2 helicopters remained on standby. Patients were ferried by EMS crews to helicopters as needed. One helicopter experienced mechanical problems causing them to abort from the MCI. The time from initial contact to EMS departure from the scene was 4 hours, utilizing 6 ambulances and 3 helicopters.

Conclusions: We report a novel case series of AB-PINACA and ADB-PINACA intoxication in patients presenting with AMS and seizures requiring intubation. Due to multiple symptomatic patients in a remote location, HEMS and ground transport were both required, placing a strain on the local EMS agency.