cardiomyopathy secondary to high serum PCP or endogenous catecholamine concentration.
Conclusions: Unexpected cardiopulmonary collapse of this individual with high-level PCP intoxication illustrates the need for close monitoring by EMS and law enforcement personnel in cases of suspected PCP intoxication.
Keywords: Phencyclidine, Death, Substance abuse

288. Psychosis from a bath salt product containing flephedrone and MDPV with serum, urine, and product quantification

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Background: The use of designer drugs commonly marketed as bath salts or plant food has risen dramatically in recent years. Several different synthetic cathinones have been indentified in these products, including 3,4-methylenedioxypyrovalerone (MDPV) and 4-fluoromethcathinone (flephedrone). We report a case of bath salt intoxication with quantitative MDPV and flephedrone levels in a patient's serum and urine, and from the bath salt product.
Case report: A 23 year old male with a prior psychiatric history arrived via EMS for bizarre behavior, suicidality, and hallucinations after reportedly insufflating a bath salt. Serum, urine, and the bath salt product were sent for testing using liquid chromatography-time-of-flight mass spectrometry (LC-TOF/MS) (TOF 6230, LC 1260, Agilent). He was found to have MDPV levels of 186 ng/mL and 136 ng/ml in his serum and urine, respectively, and flephedrone levels of 346 ng/mL and 257 ng/mL in the serum and urine, respectively. A comprehensive LC-TOF/MS screen for 39 other cathinones and 309 other drugs was negative. The white powder in question was found to contain 143 mcg MDPV and 142 mcg flephedrone per mg powder. His psychosis and agitation resolved with lorazepam, droperidol, and observation in the emergency department.
Case discussion: Agitation, psychosis, movement disorders, tachycardia, and hypertension have all been attributed to the use of MDPV; there are no prior reports detailing clinical experience with flephedrone. Considering that our patient's serum flephedrone levels were two-fold higher than his MDPV level, it is likely flephedrone contributed to his clinical toxicity. Halogenation of phenylethylamines at the para-position, such as with flephedrone, prevents metabolism via para-hydroxylation and potentially increasing clinical effects.
Conclusions: This case suggests the possibility that fluorinated cathinones, such as flephedrone, may have altered metabolism and/or elimination which may affect their course of clinical toxicity. This case also highlights the evolving composition of synthetic cathinones found in bath salt products.
Keywords: Designer drug, Drug of abuse, Laboratory

289. Sudden cardiac death associated with methylone use

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Background: Methylone is a synthetic cathinone derivative that, along with other structurally related substances, can be found in so-called "bath salt" products. Toxicity due to these substances has increasingly been reported in the medical literature in recent years. There have been few reports of severe toxicity due to methylone. We report a case of sudden cardiac death associated with the use of methylone.
Case report: A previously healthy 19-year-old male without known medical problems collapsed suddenly while jogging. Witnesses noted him to be pulseless and apneic and immediately started CPR and activated the emergency medical services system. Paramedics arrived within 5 minutes and cardiac monitoring revealed pulseless electrical activity. He was transported to a nearby emergency department where ACLS efforts were continued, but he was pronounced dead soon after arrival. An autopsy was performed and showed no anatomic cause to explain the patient's sudden death. Comprehensive toxicological analysis for drugs of abuse was performed on the patient's urine and central blood within 24 hours of death using GC/MS and detected methylone in the urine at a concentration of 70 mcg/dL. No other drugs were detected in urine or blood including pseudoephedrine, ephedrine, amphetamine, methamphetamine, MDMA, MDA, or cocaine or its metabolites. Analysis was also negative for other bath salt components including flephedrone, n-ethylcathinone, mephedrone, methedrone, ethylone, butylone, MDPV, and naphyrone.
Discussion: Methylone toxicity has rarely been described in the medical literature. Only one other methylone-associated fatality has been reported, in a 24-year-old female who developed serotonin syndrome and disseminated intravascular coagulation after ingesting a combination of methylone and butylone. No cases of sudden cardiac death associated with methylone use have been described previously. While a definitive cause-and-effect relationship cannot be established in this case, the lack of anatomic abnormalities found on autopsy and the failure to detect other cardioactive agents in the patient's blood or urine suggests strongly that methylone contributed to the patient's death.
Conclusions: Methylone has the potential to result in severe toxicity including sudden cardiac death. Specific testing for methylone and other bath salt components should be considered in such cases, particularly when other causes for sudden cardiac death are not found.
Keywords: Bath salt, Death, Forensics

290. Clinical presentations and medical complications after exposure to substances labeled as "bath salts": A ToxIC preliminary report

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