K39 A Klimaxic Head Trip

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After attending this presentation, attendees will better understand synthetic cannabinoids; discussing its pharmacology and toxicity.

This presentation will impact the forensic science community by increasing awareness and understanding of the possible toxicity of synthetic cannabinoids. Synthetic cannabinoids are relatively new drugs in the United States and it is important to make this information known to any and all parties that may be impacted by its use and/or abuse. Therefore, this information can potentially be used to educate forensic toxicologists and medical examiners as well as the lay public as to the dangers of synthetic cannabinoid use.

Synthetic cannabinoids were originally produced as research tools in order to create drugs that could potentially be used in the treatment of nausea, glaucoma, and appetite stimulation. These compounds were designed to mimic marijuana by binding to the same cannabinoid receptors that THC, the active ingredient in marijuana, bind to in the brain. There are hundreds of these compounds available, all with varying potency and varying affinity to the cannabinoid receptors. Most of these compounds are much more potent than THC and have been shown to cause increased heart rate, increased blood pressure, agitation, hallucinations, and seizures. Emergency departments and poison control centers are both seeing a rise in visits and calls from people using these compounds. The American Association of Poison Control Centers estimates 2,915 calls about synthetic cannabinoids in 2010 and as of June 30, 2011, approximately 3,094 calls have so far been received. In November 2010, the Drug Enforcement Agency (DEA) moved to designate five of these synthetic cannabinoid compounds as Schedule I drugs. In this one-year period the DEA as well as the United States Department of Health and Human Services will study these drugs further in order to evaluate whether it is necessary to permanently control these substances.

Three cases in which synthetic cannabinoids were found in blood will be discussed. Two of these cases are medical examiner cases and one is a driving while intoxicated case. A 58-year-old male with a history of heart disease, Parkinson's disease, and hypertension bought some synthetic marijuana, called "Head Trip," at a convenience store. After smoking the Head Trip, he began to complain of not feeling well. He was found unresponsive about an hour later by family members and taken to the hospital where he later died. A 29-year-old healthy female with no medical history or disease was discovered unresponsive in a hotel room by her boyfriend. The boyfriend called 911 and she was pronounced dead upon emergency personnel arrival. Possible marijuana and synthetic marijuana called "Klimax" were found in the room. A 23-year-old male driver was pulled over for drifting in and out of his lane. He was arrested for DWI after appearing intoxicated to the officer and during a search of his car two bags of "Head Trip" were found. Blood was sent to the Medical Examiner's office for testing. Results and implications of use of synthetic cannabinoids for all three of the previously described cases will be discussed.

Synthetic Cannabinoid, Pharmacology, Toxicity

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