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Synthetic Cannabinoid Effects Detailed in 5 Year Study from the American College of Medical Toxicology ToxIC Registry Database —The Largest Clinical Report to Date

ACMT will host a public Tweet Chat about Synthetic Marijuana Abuse on Thursday, July 20 from 4:00-5:00pm EST.

Phoenix, AZ—A recent article published in the *Journal of Medical Toxicology* (JMT) reports detailed clinical descriptions and management by medical toxicologists treating patients with synthetic cannabinoid exposure. Information was collected using ACMT's national Toxicology Investigators Consortium (ToxIC) database between 2010 and 2015. This study provides the largest series to date of patients presenting to emergency departments, inpatient medical floors, and intensive care units due to synthetic cannabinoid exposure.

Synthetic cannabinoids (SCs), which are sold under hundreds of brand names including “spice” or “K2”, have become common drugs of abuse in the US. The man-made drugs are marketed as “herbal incense” and viewed by many as a legal high. SCs are consumed in a variety of ways including smoking, vaping and drinking. According to the report, the drugs are commonly abused by individuals hoping to evade detection by drug screens, including active military members. After marijuana, SCs are the second most abused illicit drug class by adolescents. However, the use of SCs is still widely underreported due to limited methods of detection.

SCs are far more dangerous than marijuana, partially due to greater potency. Clinical effects are unpredictable due to the wide variety of chemical structures, inconsistent dosing, and variable potency of individual products. “Teens are having seizures, hallucinations and delirium, and those effects can last several days,” said Diane Calello, MD, contributor to this study.

Medical toxicologists participating in the ACMT ToxIC Registry collected 353 cases of SC toxicity (at sites nation-wide) between 2010 and 2015. Of these cases:

- The most common symptoms were agitation, delirium and toxic psychosis (41%).
- Fifty-nine patients (17%) had seizures.
- The median age of patients was 25 and 84% of patients were male.
- The most common pharmacologic treatment provided was benzodiazepines, followed by antipsychotics.
- Disposition was available for 276; of these 167 (61%) were managed in the emergency department, 42 (15%) were admitted to the hospital floor, and 67 (24%) were admitted to the ICU.

In this study, nearly a quarter of patients were admitted to intensive care units. According to Andrew A. Monte, MD, the lead author, “Increased public health education is needed. Expanded and improved testing strategies may decrease use by those hoping to evade detection and would certainly allow bedside providers an opportunity to provide substance abuse interventions.”

Article information: “Characteristics and Treatment of Patients with Clinical Illness Due to Synthetic Cannabinoid Inhalation Reported by Medical Toxicologists: A ToxIC Database Study.”

Monte, A.A., Calello, D.P., Gerona, R.R. et al. *J. Med. Toxicol.* (2017) 13: 146.
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The American College of Medical Toxicology (ACMT) is a professional, nonprofit association of more than 700 physicians with recognized expertise in medical toxicology. ToxIC (Toxicology Investigators Consortium) is ACMT’s nation-wide research and collaboration network.

The Journal of Medical Toxicology (JMT) is the official print journal of the American College of Medical Toxicology. JMT is dedicated to advancing the science and practice of medical toxicology through the publication of original articles, illustrative cases, review articles, and other special features.