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Health Advisory

Several States Identify Cases of Coagulopathies (Bleeding) Linked to Synthetic Cannabinoid Use *No Cases Currently Reported in Ohio*

The Centers for Disease Control and Prevention (CDC) is reporting that from March 10, 2018 through April 5, 2018, 94 people have presented to emergency departments (89 in Illinois including 2 deaths, 2 in Indiana, 1 in Maryland, 1 in Missouri, and 1 in Wisconsin) with serious unexplained bleeding. There may be an additional suspected case in Pennsylvania, according to the National Poison Data System. None of these patients were on anticoagulation therapy and had no known exposure to rat poison. The Illinois Department of Public Health and Indiana State Department of Health have linked use of synthetic cannabinoids (also referred to as synthetic marijuana) to cases of vitamin K dependent coagulopathies (bleeding), and have issued health alerts within their states.

Several Illinois cases have tested positive for brodifacoum, an anticoagulant often used in rat poison known to cause significant bleeding issues. Individuals who have used brodifacoum-tainted synthetic cannabinoids can develop coagulopathy, resulting in uncontrolled bleeding. Many Illinois coagulopathy cases have required hospitalization for symptoms such as coughing up blood, blood in the urine, severe bloody nose, and/or bleeding gums.

While Ohio has no reported cases of coagulopathy linked to the use of synthetic cannabinoids, the Ohio Department of Health is issuing this advisory to health care providers in case they see patients with similar symptoms. Ohio's emergency departments and Poison Control Centers have been made aware of the issue.

Illinois public health epidemiologists interviewed 63 patients, and they all reported synthetic cannabinoids use. These cases are believed to be related to brodifacoum-tainting; however, further testing is ongoing to obtain confirmation. Additional information about the Illinois outbreak is available on the Illinois Department of Public Health's website (<http://www.dph.illinois.gov/topics-services/prevention-wellness/medical-cannabis/synthetic-cannabinoids>). The CDC alert is available at <https://content.govdelivery.com/accounts/USCDC/bulletins/1e6dac3>

Synthetic Cannabinoids

Synthetic cannabinoids are human-made, mind-altering chemicals that are sprayed onto dried plant material. They can be smoked or sold as liquids to be vaporized in e-cigarettes and other devices. These chemicals are called cannabinoids because they are similar to those found in the marijuana plant. The health effects from using synthetic cannabinoids can be unpredictable, harmful, and deadly. Synthetic cannabinoids have brand names such as K2, Spice, Black Mamba, Bombay Blue, Genie, and Zohai, but also may be packaged under other brand names.

Synthetic cannabinoids are a Level I controlled substance under Ohio law and cannot be legally sold in the state (Ohio Revised Code <http://codes.ohio.gov/oac/4729-11> and Ohio Administrative Code <http://codes.ohio.gov/oac/4729-11-02>). However, not every state regulates synthetic cannabinoids which can be found in convenience stores, gas stations, drug paraphernalia shops, and novelty stores in those states, as well as for sale online.

Clinical Information

Brodifacoum, which has been identified in several reported cases of coagulopathy, acts as a highly potent blood thinner and acts similarly to the anticoagulant warfarin (Coumadin).

Very high bleeding levels (PT and INR) have been observed with the Illinois cases with INR values ranging from 6 to greater than 20 on presentation. Treatment for exposure to brodifacoum and the resulting coagulopathy could take weeks or months, and cases have been treated with high doses of vitamin K.

Recommendations for Clinicians

- According to CDC, clinical signs of coagulopathy include bruising, nosebleeds, bleeding gums, bleeding disproportionate to injury, vomiting blood, coughing up blood, blood in urine or stool, excessively heavy menstrual bleeding, back or flank pain, altered mental status, feeling faint or fainting, loss of consciousness, and collapse.
- Health care providers and health departments caring for or investigating unusual or uncontrolled cases of bleeding should inquire about potential exposures to synthetic marijuana (including sites of purchase), and conduct INR testing if there is clinical suspicion for synthetic marijuana use.
- Brodifacoum is not detected on a typical toxicology screen, and delaying treatment to obtain a brodifacoum level is not recommended. Clinicians should rely on PT and INR levels to guide treatment.
- Until the specific products involved are identified, health care providers should conduct INR testing on any patients with recent synthetic marijuana use even if those patients have not had any abnormal bleeding.
- Patients sent home from surgery or other procedures that could result in bleeding should be told not to use synthetic cannabinoids because of the risk that the product may be contaminated with an anticoagulant.

Report Suspected Ohio Cases of Coagulopathy After Use of Synthetic Cannabinoids

Report all suspected cases to the Ohio Poison Control Center at 1-800-222-1222. The Ohio Department of Health will collaborate with the Ohio Poison Control Center and local health departments to track and investigate any reported cases.