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Case Report: Unintentional Edible THC Ingestion (Gummi Worms) in a Child

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Abstract:

We report the case of a 4 year male who presented to the ED with what his mother described as unusual fatigue and sleepiness. The mother related that family and friends had some to her house for a holiday gathering and that one of the guests had an accessible and open handbag that contained gummi worm THC. The guest observed the child eating the gummi worms and immediately notified the patient's mother. Poison control was contacted. The child was observed for 6 hours and left the ED in good condition without any specific treatment needed. Awareness of the potential of unintentional edible cannabis in the pediatric population is important.

Case Presentation:

We report the case of a 4 year male who presented to the ED with what his mother described as unusual fatigue and sleepiness. The mother related that family and friends had come to her house for a holiday gathering and that one of the guests had an accessible and open handbag that contained gummi worm THC. The guest observed the child eating the gummi worms and immediately notified the patient's mother. The child was initially alert and playful at the home but became increasing fatigued and sleepy. The ingestion was one hour prior to ED presentation. The mother brought the empty package of gummi worms to the ED. The bag was clearly marked that there were 10 gummi worms in a bag. Each gummi contained 10 milligrams of THC. The child weighed 46 pounds (21 kilograms). The guest states that the bag had been opened and that one gummi had been ingested by the guest. Thus, the total maximum THC ingestion was 90 mg.

On arrival the child appeared tired and sleepy, but was easily arousable. Some mild tremors were noted on arrival. Vital signs on arrival were within normal limits for age. The oxygen saturation was 99%. There had been no nausea or vomiting. The patient was able to ambulate after the ingestion, but was in mother's arms on arrival. Physical exam revealed a sleepy child who was easily awakened but then went back to sleep. He was able to follow commands easily. Physical exam was otherwise unremarkable. There were no focal findings. There was no nystagmus. Poison control was contacted. Poison control recommended 4 to 6 hours of observation in the ED and discharge if fully alert with normal vital signs and a normal exam. They did not recommend laboratory testing. A bedside glucose was within normal limits. The patient was reevaluated every 30 minutes. It was noted that the patient became fully alert after two hours in the ED. At three hours the patient was watching cartoons on a cell phone. The patient was ambulatory at 4 hours and wanted to play in the hallways of the ED. The patient was discharged at 6 hours after arrival. Follow up contact with the patient's mom at 24 and 48 hours revealed that the patient showed full recovery and was playing, was alert and had a good appetite.

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Discussion:

Epidemiology

A review of acute cannibis toxicity notes that emergency department visits for cannibis toxicity in children increased from 1.2 per 100,000 population to 2.3 per 100,000 population. [2,6] This increase is seen both in young children and in adolescents. [1] Cannibis extracts can be infused into several common food items, such as brownies, cookies and candies (such as gummy worms) which can increase the risk of cannibis exposure to young children. [1] Cannibis has also been infused into popcorn and beverages. [4] Poison control calls for unintentional edibile pediatric ingestions of cannibis have increased in the United States. [5]

Mechanism of action

Cannibis contains over 500 chemical components (cannabinoids) of which the most well described are tetrahydrocannabinol (THC) and cannabidiol (CBD). THC is the principal component responsible for central nervous system effects. [6]

Symptoms

THC can produce a wide range of symptoms. These are principally neurologic (euphoria, sedation, ataxia, stupor, coma); eye-related (nystagmus, injected conjunctiva, sluggish pupils); cardiovascular (tachycardia) and gastrointestinal (nausea, vomiting, increased appetite, thirst). [6] Cannibis can cause psychosis in children as well as hypothermia. [3]

Treatment

Standard treatment is supportive. (airway, breathing and circulation) with treatment of specific symptomology. [6]

Conclusions:

A review of acute cannibis toxicity notes that emergency department visits for cannibis toxicity in children increased from 1.2 per 100,000 population to 2.3 per 100,000 population. This increase is seen both in young children and in adolescents. Cannibis extracts can be infused into several common food items, such as brownies, cookies and candies (such as gummy worms) which can increase the risk of cannibis exposure to young childrenTHC can produce a wide range of symptoms. These are principally neurologic (euphoria, sedation, ataxia, stupor, coma); eye-related (nystagmus, injected conjunctiva, sluggish pupils); cardiovascular (tachycardia) and gastrointestinal (nausea, vomiting, increased appetite, thirst). Cannibis can cause psychosis in children as well as hypothermia.

Awareness of the potential of unintentional edible cannabis in the pediatric population is important.

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