276. Acute intoxications by synthetic cannabinoids in the emergency system: An Italian cases series

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Objectives: Synthetic cannabinoids (SC) represent approximately 80% of novel psychoactive substances (NPS) registered in recent years. This study examines the clinical manifestations of SC intoxicated patients seen in Emergency Departments (EDs) in Italy.

Methods: All cases evaluated by EDs network and followed by Pozzo Poison Control Center for a 2-year period (2016-2017) are included. Symptomatic patients with reference to exposure or abuse of SC were included. Demographic data, clinical course and laboratory results (biological samples/analyzed substances) were collected and evaluated.

Results: In total 60 patients (41.5% of cases with acute SC intoxication were analyzed. Cases were collected from all over Italy. SC were mainly consumed (80%) by smoking and (70%) were brought online in 35% of cases. Advanced laboratory analysis (in order to detect the specific SC) were performed in 80% of cases (n = 32). The clinical considerations and the correlation between clinical manifestations and specific SC were performed in the sub-group of patients (n = 12) poisoning by SC in seen. The main clinical manifestations were tachycardia (>100 bpm in 62%, k = 123), mydriasis (5%, n = 13), abnormal respiration or agitation (4%, k = 9), gastrointestinal symptoms (24%, n = 5), hypotension (10%, n = 4) and hallucinations (14%, n = 3) were observed in 35% of cases. No deaths were recorded. The SCs identified in serum and urine sample were: PH21-122 (n = 12), PHW1-018 (n = 3), PHW1-250/PHW1-122 (n = 3), JWH-015 (n = 1), MAM-2201 (1 case), PHW1-018/PHW1-122 (n = 1) and JWH-015/PHW1-122 (1 case).

Conclusions: SC acute intoxications are an important and confirmed problem in the Italian emergency setting. Clinical diagnosis a difficult and accurate screening for synthetic cannabinoids (THC) will be required. The emergency physician plays a key role in detection of acute SC intoxication in order to proceed with second level analysis necessary to confirm the abuse. According to emerging medical reports, close monitoring for functional and toxic damage is necessary.

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References:

277. Bad trip due to 25I-NBOMe: A case report from the EU Project SPICE II Plus

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Objective: A new group of novel psychoactive substances, the N,N-dimethyltryptamine (DMT) derivatives, of the “SC series” (Alpha-pyrrolidinylcarboxylic acid; 25i-NBOMe), has recently emerged on the drug market. Among these substances, 25i-NBOMe is an extremely potent drug with stimulant and hallucinogenic properties. We present an acute case with analytically confirmed 25i-NBOMe intoxication from the prospective study within the EU project SPICE II Plus.

Case report: A 42-year-old man took one sip of a peculiar alcoholic syrup in the family’s refrigerator because he had a severe headache. Thirty minutes later he complained of nausea. On arrival in the emergency department vital signs were unremarkable (blood pressure 120/80 mmHg, heart rate 70/ min). Examination revealed excited dilated pupils, strong sweating, diaphoresis, tremors and vomiting. The patient’s condition severely deteriorated within the short time, he was transferred to the intensive care unit. There he presented with severe agitation, auditory and somatic hallucinations, and complex visual hallucinations (particularly hallucinating noises and voices). The patient was shaking and crying. 25i-NBOMe ≥5 μg/ml, and 25g-I (200 μg/ml) were found in the patient’s urine sample obtained 1 hour after ingestion. The Mood enhanced concentration was 0.0 g/l. The plasma Noradrenaline level was determined as unreported.
Acute intoxications by synthetic cannabinoids in the emergency system: the Italian cases series.

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Background: Synthetic cannabinoids (SC) are synthetic drugs that bind the same receptors as phytocannabinoids (CB1 and CB2) but with higher affinity. This partially explain the reported differences in clinical picture in case of poisoning. SC firstly appeared on the European market in 2005 and are mostly purchased on the Internet or in small shops as herbal blends (Fig. 1). In 2012, SC were approximately 30% of new psychoactive substances signaled by European Monitoring Center for Drugs and Drug Addiction (Fig 2). In Italy, the first cases were reported in 2010 by Pavia Poison Control Centre (PPCC).

Objective: to describe clinical manifestations and toxicological findings of intoxicated patients by SC at Emergency Departments (EDs) admission.

Methods:

Study Period: January 2010 - December 2012
Setting: all cases evaluated by Italian EDs and followed by PPCC
Inclusion criteria: history of assumption of substances attributable to SC
Study design: shown on the right

Results: 40 cases of acute intoxication by SC were included (14-56 years), distributed all over the country (Fig. 3). In 45% of cases the drug was bought on Internet (Fig 4), in 36/40 cases the CS was smoked (Fig 5). In 32/40 cases (80%) toxicological analysis was effected on biological samples and, in 11 cases, also on consumed substance. All evaluated cases were positive for one or more SC. In 25 cases analysis were carried out both in blood and in urine sample. Among these, samples collected within 10 hours from assumption were positives both in urine and blood sample. After 10 hours, only urinary positivity was observed (Fig 6). Clinical manifestations evaluated for cases with positive blood analysis results evidenced tachycardia, mydriasis, agitation and drowsiness as the most frequent findings at the ED presentation (Fig 7).

Conclusions: SC acute intoxications are an important and confirmed problem in the Italian emergency setting. Clinical diagnosis can be challenging and they are not detectable by routine toxicological screening performed in ED. Collaboration between ED and PPCC is crucial in raising clinical suspicion of SC intoxication, in order to proceed with second level laboratory analysis. Latest medical reports suggest close monitoring for functional and toxic organ damages. Correct diagnosis allows suitable cases follow up also in relation to the epidemiological implications and monitor of possible long term effects, not even known for these substances.