Acute intoxication of two adults after intake of alleged ecstasy tablets containing the synthetic cannabinoid ADB-PINACA

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Abstract

The forensic Science Institute analysed seized samples from two patients, taken during and after an acute intoxication. Both patients were orally administered alleged ecstasy tablets containing the synthetic cannabinoid ADB-PINACA. Results confirmed the initial suspicion of the acute intoxication and a clinical interview revealed additional information.

Conclusions

The case exemplifies the possible health threats of adulterated drugs of abuse and shall remind physicians and toxicologists to be aware of the potential for intoxication after oral intake of this drug.

Introduction

Drug abuse is associated with many potential health risks and even experienced drug users are at risk especially due to coingestion of active ingredients or the addition of unknown pharmaceutically active substances. The increasing availability and number of 'legal highs' such as new psychoactive substances (NPS) on the market - like synthetic cannabinoids and designer drugs - has aggravated this problem. Several intoxication cases and even deaths have been reported due to the particular content of active ingredients, e.g. high MDMA content in ecstasy pills or addition of potent analgesics (e.g. fentanyl derivatives) to street heroin or other drugs of abuse.

By the end of 2017, the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) listed more than 1000 NPS with different NPS with more than half of them still present on the European drug market in 2018. This demonstrates the complexity of the current drug market and the ongoing challenges for physicians, law enforcement and clinical toxicologists.

We report the case of a couple in need of intensive medical care after the intake of a supposed ecstasy tablet containing unexpected compounds.

Analytical Results

The forensic Science Institute analysed seized samples from both patients, taken during and after an acute intoxication. Both patients were orally administered alleged ecstasy tablets containing the synthetic cannabinoid ADB-PINACA. Results confirmed the initial suspicion of the acute intoxication and a clinical interview revealed additional information.

A total of 57 different exhibits - including tablets, powders, tobacco, and leaves - found at the dealer’s residence and the tablet found in the patient’s tablet were analysed for relevant psychoactive substances.

Serum samples of the two patients, the tablets, and the powder were subjected to HPLC, GC, and GC-MS analysis. The synthetic cannabinoids ADB-PINACA and ADB were detected in all samples from the patients and the tablet. Additionally, opioids, amphetamines, benzodiazepines, and cannabinoids were also found in some samples.

Tablet samples (2 tablets):<br>• Synthetic cannabinoids ADB-PINACA and ADB were detected in all samples from the patients and the tablet.<br>• Additionally, opioids, amphetamines, benzodiazepines, and cannabinoids were also found in some samples.

Serum samples of the two patients (Table 1):<br>• Synthetic cannabinoids ADB-PINACA and ADB were detected in all samples from the patients.<br>• Additionally, opioids, amphetamines, benzodiazepines, and cannabinoids were also found in some samples.

Table 1: Results from the forensic Science Institute

### Table 1

<table>
<thead>
<tr>
<th>Sample Type</th>
<th>ADB-PINACA (μg/mL)</th>
<th>ADB (μg/mL)</th>
<th>Opioids (μg/mL)</th>
<th>Amphetamines (μg/mL)</th>
<th>Benzodiazepines (μg/mL)</th>
<th>Cannabinoids (μg/mL)</th>
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</thead>
<tbody>
<tr>
<td>Tablet</td>
<td>10.9</td>
<td>0.1</td>
<td>10.9</td>
<td>1.0</td>
<td>10.9</td>
<td>10.9</td>
</tr>
<tr>
<td>Patient 1</td>
<td>10.9</td>
<td>0.1</td>
<td>10.9</td>
<td>1.0</td>
<td>10.9</td>
<td>10.9</td>
</tr>
<tr>
<td>Patient 2</td>
<td>10.9</td>
<td>0.1</td>
<td>10.9</td>
<td>1.0</td>
<td>10.9</td>
<td>10.9</td>
</tr>
</tbody>
</table>

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