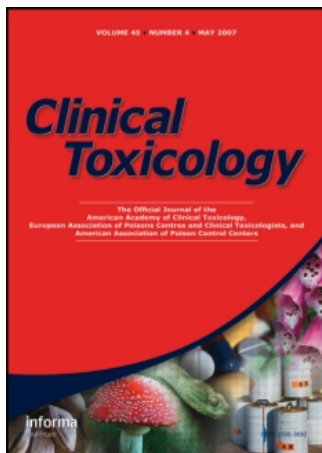


This article was downloaded by:[Advanced Institute of Sanita]
On: 19 February 2008
Access Details: [subscription number 769796960]
Publisher: Informa Healthcare
Informa Ltd Registered in England and Wales Registered Number: 1072954
Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



Clinical Toxicology

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title~content=t713597279>

Death from a possible anaphylactic reaction to ecstasy

Anny Sauvageau^a

^a Lab de Sciences Judiciaires at de Medecine Legale, Montreal, Quebec, Canada

Online Publication Date: 01 February 2008

To cite this Article: Sauvageau, Anny (2008) 'Death from a possible anaphylactic reaction to ecstasy', *Clinical Toxicology*, 46:2, 156

To link to this article: DOI: 10.1080/15563650701320326

URL: <http://dx.doi.org/10.1080/15563650701320326>

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.informaworld.com/terms-and-conditions-of-access.pdf>

This article maybe used for research, teaching and private study purposes. Any substantial or systematic reproduction, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

CASE REPORT

Death from a possible anaphylactic reaction to ecstasy

ANNY SAUVAGEAU

Lab de Sciences Judiciaires at de Medecine Legale, Montreal, Quebec, Canada

Ecstasy (3,4 methylenedioxymethamphetamine, or MDMA) is a recreational drug widely used among young people in discos or rave parties (1,2). MDMA is taken because it gives a feeling of euphoria, enhances energy and sociability, and heightens sensations and sexual arousal. However, several side effects have been described: headache, nausea, anorexia, xerostomia, insomnia, myalgia, trismus, and bruxism (2,3). More serious complications have also been reported, sometimes even leading to death: hyperthermia, disseminated intravascular coagulopathy, rhabdomyolysis, acute renal failure, liver failure, and water intoxication (2,3). We report the unusual case of a death due to an apparent allergic reaction following ecstasy ingestion.

Keywords Ecstasy; Death; Anaphylaxis

A healthy 13-year-old girl was partying with some school friends and her older boyfriend. The latter, a known ecstasy dealer, gave each girl one and a half tablets of ecstasy. While the other girls remained well, the victim started complaining of nausea and took an antiemetic containing zingerone. Still, she vomited and finally became apneic about four hours after the ecstasy ingestion. When emergency services arrived, she was comatose (Glasgow Coma Scale 3/15), hypothermic (33°C), hypotensive (85/67 mmHg), and tachycardic (120 beats/minute). She was first intubated with a combitube by the paramedics and then with a #7 tube in the emergency department; there was no mention of the easiness or difficulty of intubation in the medical record. Despite medical treatment, she was declared brain dead about 30 hours after the ecstasy ingestion. At autopsy, there was massive brain edema (1420g) with both tonsillar and transtentorial herniations, along with anoxic/ischemic encephalopathy. Lungs were heavy and congested (right: 560g; left: 420g). Laryngeal edema was also noted. Toxicological analyses revealed presence of zingerone in the urine and MDMA in the blood. The MDMA blood concentrations taken at hospital arrival (<0.05 mg/dL) and during autopsy were too low to explain death by acute toxicity alone. Other concomitant intoxication by alcohol or another drug was also excluded. Furthermore, biochemical analyses during hospitalization as well as autopsy findings were not consistent with disseminated intravascular

coagulopathy, rhabdomyolysis, hyponatremia, acute renal or liver failure, and water intoxication. On the other hand, it is interesting to note that the victim's test results showed increased neutrophils ($16.2 \times 10^9/L$ [reference range 1.4 to $6.5 \times 10^9/L$]). It was later found that the victim had taken ecstasy for the first time a few weeks before her death. On this first experience, her family and friends reported that she suffered from swelling of the lips. This interesting observation, in association with the laryngeal swelling noted at autopsy and the increased neutrophil count, was considered highly suggestive of an allergic reaction to ecstasy.

A multidisciplinary team of forensic pathologists and toxicologists along with emergency physicians re-evaluated the case and concluded that an anaphylactic reaction to ingestion of an ecstasy tablet was the most probable cause of death. However, it is not possible to determine if the reaction was induced by MDMA per se or by an adulterant. This is the first reported case of a possible anaphylactic reaction to MDMA, despite the large number of MDMA users. There are no reported cases of anaphylaxis or even serious hypersensitivity involving MDMA in the indexed medical literature. Since there is no similar case in the literature, we thought it was important to report it.

References

1. Milroy CM. Ten years of 'ecstasy.' *J R Soc Med* 1999; 92(2):68–72.
2. Milroy CM. Pathology of deaths associated with "ecstasy" and "eve" misuse. *J Clin Pathol* 1996; 49(2):149–153.
3. Kalant H. The pharmacology and toxicology of "ecstasy" (MDMA) and related drugs. *CMAJ* 2001; 165(7):917–928.
4. Teter CJ, Guthrie SK. A comprehensive review of MDMA and GHB: Two common club drugs. *Pharmacotherapy* 2001; 21(12):1486–1513.

Received 1 December 2006; accepted 2 March 2007.

Address correspondence to Anny Sauvageau, Lab de Sciences Judiciaires at de Medecine Legale, Edifice Wilfrid-Derome, 1701 Pathenais St., 12th Floor, Montreal, Quebec H2K 3S7 Canada. E-mail: a.sauvageau@msp.gouv.qc.ca