

A 22 Year-Old Woman with Severe Hyponatremia and Cerebral Edema in the E.D: A Case Report

J Ashkar*, O Mahmood and P Pechansky

The Emergency Medicine Department, Hillel Yaffe Medical Center Hadera, Affiliated with Rappaport Faculty of Medicine, The Technion Haifa, Israel

***Corresponding Author:** J Ashkar, Head of Emergency Medicine Department, Hillel Yaffe Medical Center, Hadera, Israel.

Received: March 19, 2019; **Published:** May 28, 2019

Abstract

Ecstasy is 3,4 methylenedioxy-methamphetamine.

We present an unusual case of ingestion ecstasy and alcohol with life threatening neurological, hemodynamic and respiratory distress. Requiring use of norepinephrine and ventilator support.

Keywords: *Hyponatremia; Cerebral Edema*

Introduction

Ecstasy is the street name for a version of MDMA, or 3,4 methylenedioxy – methamphetamine. It is an illegal, synthetic drug classified as a stimulant with potentially hallucinogenic properties. Molly is another name for MDMA. Both Ecstasy and Molly are derived from MDMA, but Ecstasy is used to describe a designer version in pill or tablet form, while Molly is used for the white powder or crystal-like substance.

Aim of the Study

The aim of this paper to present unusual case of Ecstasy and alcohol intoxication in young woman that was complicated with cerebral edema and hyponatremia.

Case Report

A 22 years old female patient without medical history was admitted to the E.D by Ambulance staff with alcohol abuse story, convulsion without head injury.

Upon arrival in the ED: BP 134/80; Temp 34.40 ; o₂ Sat 100%; E.C.G –sinus tachycardia with HR110.

Physical examination normal regular heart sound without added murmur/good bilateral air enter to the lung, no sign of head injury, it's difficult to assess its neurological status but she have bilateral dilated pupils.

Laboratory blood serum was taken and the patient was sent for a CT head scan.

The immediate result of the CT was moderate cerebral edema. The blood test showed hyponatremia 118 mmol/L and the patient's urine toxicology was positive for cannabis.

The patient was intubated and admitted to the Intensive Care department.

Symptoms of hyponatremia include: neurogenic pulmonary capillary leak resulting in cerebral edema and pulmonary edema. In addition the patient can experience headache, vomiting, convulsion and confusion.

Ecstasy cause hyponatremia by

- a. Drinking of water central polydipsia.
- b. Over secretion of ADH.
- c. Decrease in EI motility and large volume static of electrolyte free water in lumen of EI tract.
- d. Transient acute proximal tubular injury.

Admission to Iccu sibilated the patient treatment with Isotonic saline.

Patients who have had seizures after Ecstasy ingestion usually resist the effects of anti-epileptic drugs. Thus, it is important for ED physicians to note that in cases presenting with hyponatremia plus cerebral edema one should think about Ecstasy.

A brief scan of medical articles and books and a search for cases of hyponatremia and cerebral edema in young patients with no medical history revealed that in the context of alcohol abuse, drugs were the initial differential diagnosis, and especially Ecstasy (3,4 methylenedioxy methamphetamine- MDMA).

A case study of a 20-year-old female patient with severe hyponatremia and cerebral edema due to Ecstasy and alcohol was presented in Nature Clinical Practice. Nephrology: Vol. 2, Iss. 5, (May 2006): 283-288.

Discussion

General hemodynamic tolerance is very good during ecstasy and alcohol ingestion, except cerebral edema and severe hyponatremia, the management may include hypertonic saline and multi-disciplinary approach and intensive care management [1-10].

Conclusion

It is important in the ED to be aware that in a patient with hyponatremia plus cerebral edema one should think about Ecstasy. Acute severe hyponatremia and cerebral edema related to ecstasy must be evoked.

Bibliography

1. Sue YM., *et al.* "Acute hyponatremia, seizure, and rhabdomyolysis after ecstasy use". *Journal of Toxicology-Clinical Toxicology* 40.7 (2002): 931-932.
2. Williams DM., *et al.* "The clinical management of hyponatraemia". *Postgraduate Medical Journal* 92.1089 (2016): 407-411.
3. Kalant H., *et al.* "The pharmacology and toxicology of 'ecstasy' (MDMA) and related drugs". *Canadian Medical Association Journal* 165.7 (2001): 917-928.
4. Ball SG., *et al.* "Diagnosis and treatment of hyponatraemia". *Best Practice and Research. Clinical Endocrinology and Metabolism* 30.2 (2016): 161-173.
5. Hartung TK., *et al.* "Hyponatraemic states following 3,4-methylenedioxymethamphetamine (MDMA, 'ecstasy') ingestion". *QJM: An International Journal of Medicine* 95.7 (2002): 431-437.
6. Qureshi AI, *et al.* "Use of hypertonic saline solutions in treatment of cerebral edema and intracranial hypertension". *Critical Care Medicine* 28.9 (2000): 3301-3313.
7. Screaton GR., *et al.* "Hyperpyrexia and rhabdomyolysis after MDMA ('ecstasy') abuse". *The Lancet* 339.8794 (1992): 677-678.
8. Raslan A and Bhardwaj A. "Medical management of cerebral edema". *Neurosurgical Focus* 22.5 (2007): E12.

9. Van Dijken GD, *et al.* "High incidence of mild hyponatraemia in females using ecstasy at a rave party". *Nephrology Dialysis Transplantation* 28.9 (2013): 2277-2283.
10. Simon Eric E., *et al.* "Hyponatremia: Evaluation and Treatment". Springer Science & Business Media (2014): 205.

Volume 3 Issue 6 June 2019

©All rights reserved by J Ashkar., *et al.*