VALPROIC ACID INTOXICATION; CONSERVATIVE MANAGEMENT ACHIEVED FAVORABLE RESULTS IN 316 INTOXICATED PATIENTS

Hassan, Amiri [1]; N Zamani[2];H Hassanian-Moghaddam[2;] N Ghodrati [3]; M Rezai [4]; S Shadnia [2]; Z Vasei [4]

[1]Department of Emergency Medicine, Emergency Management Research Centre, Iran University of Medical Sciences.

[2]Department of Clinical Toxicology, Loghman-Hakim Hospital, Shahid Beheshti University of Medical Sciences, Tehran, Iran

[3]Department of Internal Medicine, Hematology, and Oncology, Alborz University of Medical Sciences.

[4]Department of Emergency Medicine, Firouzgar Hospital, Faculty of Medicine, Iran University of Medical Sciences.

Background: Valproic acid (VPA) is an effective antiepileptic drug widely used worldwide. Despite several studies indicating the usefulness of intravenous L-carnitine in the treatment of VPA poisoning, this drug is not readily available in our country. The objective of this study was to determine whether supportive care without antidote would result in acceptable outcomes in VPA-poisoned patients.

Materials and Methods: All patients with VPA overdose who had referred to Loghman-Hakim medical toxicology center between 2009 and 2013 were consecutively enrolled. Patients' demographic and presenting features, physical examinations, clinical management, laboratory data, and outcomes were recorded.

Results: A total of 316 patients were enrolled with pure VPA toxicity. The most common presenting signs/symptoms were drowsiness, nausea and vomiting, vertigo, and headache. In the course of the disease, 14 patients (4.4%) were intubated and three (0.9%) required hemodialysis with mean dialysis sessions of two. Fourteen patients were admitted to ICU and seizures occurred in five.The initial level of consciences was lower in patients with poor outcome. The median ingested dose of VPA in patients who required dialysis was significantly higher (20 vs. 6 g; P = 0.006). Multivariate analyses revealed that coma on presentation was associated with a worse outcome (P = .001; odds ratio = 61.5).

Conclusion: Prognosis of VPA-poisoned patients appears to be good even with supportive care. According to our study, the main poor prognostic factor is coma on presentation. Older age, ingestion of higher amounts of VPA, and lower PCO2, HCO3, base excess, and CPK levels prone the patients to more severe toxicities.

Keywords: anticonvulsant, valproic acid, poisoning, overdose, supportive care