Taylor & Francis
Taylor & Francis Group

Journal of Toxicology: Clinical Toxicology

ISSN: 0731-3810 (Print) (Online) Journal homepage: http://www.tandfonline.com/loi/ictx19

Are There Any Unique Valproic Acid Ingestions?

Henry A. Spiller & Edward P. Krenzelok

To cite this article: Henry A. Spiller & Edward P. Krenzelok (2001) Are There Any Unique Valproic Acid Ingestions?, Journal of Toxicology: Clinical Toxicology, 39:4, 421-422, DOI: 10.1081/CLT-100105167

To link to this article: http://dx.doi.org/10.1081/CLT-100105167

Published online: 31 Jul 2001.

Submit your article to this journal

Article views: 40

View related articles

Full Terms & Conditions of access and use can be found at
http://www.tandfonline.com/action/journalInformation?journalCode=ictx19

Download by: [American Academy of Clinical Toxicology] **Date:** 08 June 2017, At: 10:06

Clinical Toxicology, 39(4), 421–422 (2001)

LETTER

Are There Any Unique Valproic Acid Ingestions?

To the Editor:

We appreciate the comments by Wasserman, Aldridge, Kelly, and Abdel-Rahman concerning their patient (1) and our multicenter case series of valproic acid ingestion (2). While our case series represented the largest such compilation of valproic acid ingestions published to date, it should not be construed to be the definitive paper on valproic acid poisonings. Therefore, it would not be unusual for there to be exceptions to the patients described in our case series. Wasserman et al. presented a patient that ''doesn't quite fit the general description'' of the profile presented in our paper. In fact, the patient's presentation was not unusual and in reality fit quite nicely into the model we presented.

The assertion that a peak serum concentration at 4 hours is outside of the norm takes considerable liberty with the interpretation of our data. The mean time to peak serum concentration presented in our paper was 7.4 (SD $\pm$ 3.9). The single case presented by Wasserman et al. reported a measured peak ''at approximately 4 hours.'' This value actually fits within one standard deviation of our mean and precisely what we would have expected based on the data from our case series. The data on delayed peak serum concentrations was presented to alert clinicians of an anticipated but rarely cited potential delay in the absorption of valproic acid. While the profound delays to peak represent a deviation from the norm (Table 2 from our paper showed that 81% did not exhibit a delay of 10 hours), we believe that physicians and clinical toxicologists should be cognizant of that finding as well as the implications of delayed absorption. We feel strongly that this warning is appropriate.

We urge caution with the authors' interpretation of limited serum concentrations to predict a peak concentration. The well-documented erratic absorption of valproate in the divalproex form should give pause to any interpretation without more data points.

The patient presented by Wasserman et al. was reported to have a peak measured serum concentration (somewhat consistent with the authors' attempt at kinetic prediction of a peak concentration) of 475 mcg/mL and relatively mild symptoms. If this patient had been entered into our study protocol, he would have been classified as a moderate outcome (ataxia, dizziness, slurred speech, weakness, hypertension, thrombocytopenia, and elevated ammonia levels). Consistent with American Association of Poison Control Center medical documentation guidelines, a moderate effect was defined as a systemic effect of a more prolonged nature. We determined that serum concentrations >450 mcg/mL were associated with an increased risk of moderate to major outcome.

We continue to stand by our statement that ''The majority of patients with valproic acid ingestion experience minimal toxicity, such as lethargy, with benign outcomes and short hospital stays. Although most patients had a benign outcome, those with serum concentrations above 850 mcg/mL require more aggressive vigilance.''

Henry A. Spiller
Kentucky Regional Poison Center

Edward P. Krenzelok
Pittsburgh Poison Center
University of Pittsburgh Schools of Pharmacy and Medicine

ORDER REPRINTS

REFERENCES

1. Wasserman, G.S.; Aldridge, S.C.; Kelly, J.C.; Abdel-Rahman, S.M. A Unique Valproic Acid Ingestion (Letter). J. Toxicol. Clin. Toxicol. **2001**, *39* (4), 419–420.
2. Spiller, H.A.; Krenzelok, E.P.; Klein-Schwartz, W.; Winter, M.L.; Weber, J.A.; Sollee, D.R.; Bangh, S.A. Multicenter Case Series of Valproic Acid Ingestion: Serum Concentrations and Toxicity. J. Toxicol. Clin. Toxicol. **2000**, *38*, 755–760.

Copyright © Marcel Dekker, Inc. All rights reserved.

Marcel Dekker, Inc.
270 Madison Avenue, New York, New York 10016

Request Permission or Order Reprints Instantly!

Interested in copying and sharing this article? In most cases, U.S. Copyright Law requires that you get permission from the article's rightsholder before using copyrighted content.

All information and materials found in this article, including but not limited to text, trademarks, patents, logos, graphics and images (the "Materials"), are the copyrighted works and other forms of intellectual property of Marcel Dekker, Inc., or its licensors. All rights not expressly granted are reserved.

Get permission to lawfully reproduce and distribute the Materials or order reprints quickly and painlessly. Simply click on the "Request Permission/Reprints Here" link below and follow the instructions. Visit the U.S. Copyright Office for information on Fair Use limitations of U.S. copyright law. Please refer to The Association of American Publishers' (AAP) website for guidelines on Fair Use in the Classroom.

The Materials are for your personal use only and cannot be reformatted, reposted, resold or distributed by electronic means or otherwise without permission from Marcel Dekker, Inc. Marcel Dekker, Inc. grants you the limited right to display the Materials only on your personal computer or personal wireless device, and to copy and download single copies of such Materials provided that any copyright, trademark or other notice appearing on such Materials is also retained by, displayed, copied or downloaded as part of the Materials and is not removed or obscured, and provided you do not edit, modify, alter or enhance the Materials. Please refer to our Website User Agreement for more details.

Order now!

Reprints of this article can also be ordered at
http://www.dekker.com/servlet/product/DOI/101081CLT100105167