

Category : **Renal: extracorporeal support**

A62 - Successful treatment of severe valproic acid intoxication with cytosorb® haemoadsorption

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Introduction:

Valproic acid (VPA) is moderately dialyzable in case of overdosing. In vitro data show effective removal with an haemadsorbent system [1]. We report the first successfully treated clinical case of a lethal VPA intoxication with CytoSorb® (CS) haemadsorption after an intermittent haemodialysis (IHD) session.

Patient written informed consent was obtained for publication.

Methods:

A 54-year-old male was admitted to the emergency department following auto intoxication with VPA, lorazepam and olanzapine. He was intubated because of lowered mental status (GCS 4). First measured VPA plasma concentration was 1320mg/l with a free fraction of 1012mg/l. IHD was commenced for 4 hours. As VPA remained at toxic levels, a citrate-anticoagulated continuous veno-venous haemodialysis (CVVHD) circuit was initiated with a CS cartridge installed in pre-haemofilter position. Blood samples were collected at the adsorber in-and outlet to evaluate VPA plasma levels.

Results:

At the start of CVVHD and CS therapy, VPA bound and free fraction plasma levels were 525 mg/ml and 335 mg/ml respectively. Combined treatment resulted in a decline to 50 mg/ml and 0 mg/ml over the course of 30 hours (*Figure 1*). A total of 3 adsorbers were used. CS showed saturation in approximately 3 hours.

On day 3 our patient was awake and extubated successfully. He was discharged to the psychiatric ward for further treatment.

Conclusion:

Combined CVVHD and CS haemadsorption therapy is an effective add-on treatment for life-threatening VPA intoxication.

References:

1. Reiter K et al. Blood Purif 20:380-388, 2002

Image :

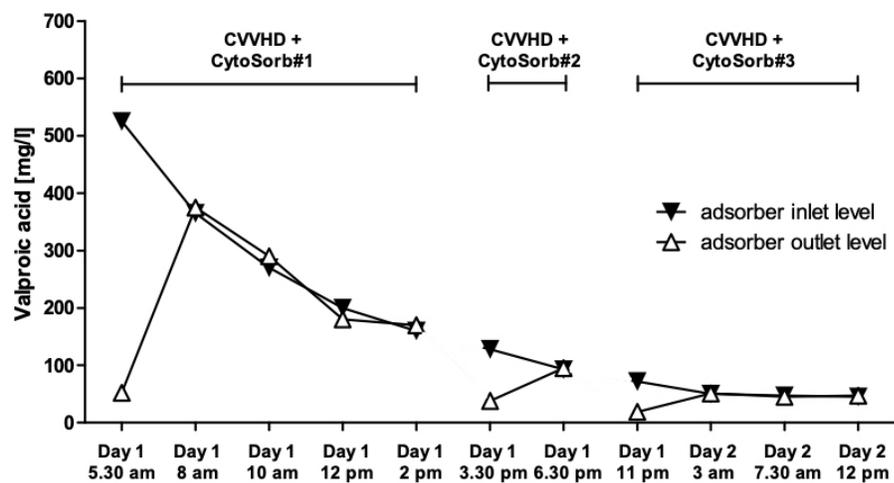
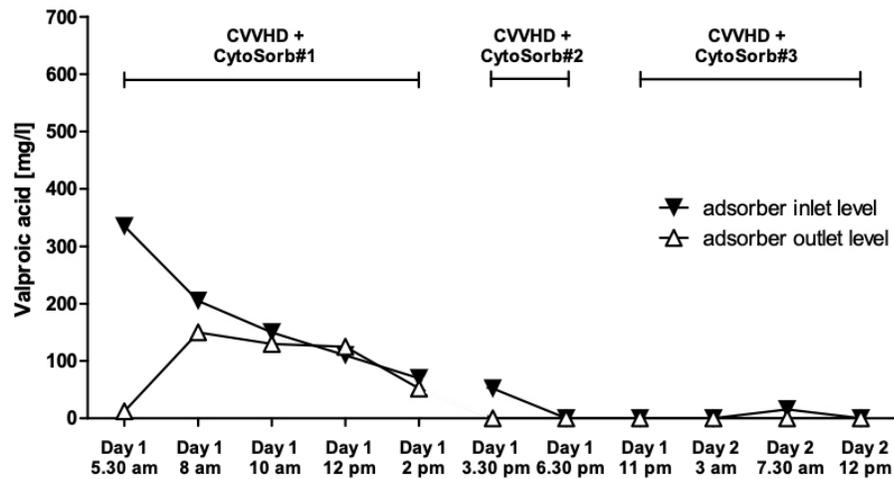
A**B**

Figure 1. Plasma VPA levels during CVVHD + CS treatment: A) Bound fraction B) Free fraction