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The role of hemodialysis in treatment of acute acetic acid poisonings

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Abstract

The aim of this study is to show the importance of hemodialysis as an active method in treatment of acute acetic acid poisonings. Its main role is to support the renal function during the state of the intoxication when patients develop acute renal failure.

We analyzed data from a 10-year period, a total of 71 patients who ingested acetic acid, either intentionally or accidentally. Patients with a need of hemodialysis (HD) treatment underwent 3- to 4-hour HD sessions every day or every second day, according to clinical assessment, as needed, until recovery of kidney function.

In the period between 2006 and 2015 at the university clinic for toxicology and urgent internal medicine, we hospitalized 6,106 patients with different kinds of intoxication, of which 1.162% ingested concentrated acetic acid; 47 patients were female and 24 were male. The minimal age of patients was 18 and the maximal 74 years. A total of 28 (39.43%) of the patients developed acute renal failure and in 10 patients (14.08%) we used hemodialysis as a part of the treatment. The maximum number of performed sessions in one patient was five and the minimal number of performed sessions in one patients was only one session. The use of heparin led to fatal bleeding in 4 patients. The mortality rate was 7% and most of the cases resulted in fatalities during the first 96 hours after ingestion.

Acetic acid poisonings are one of the most dangerous intoxications seen in clinical toxicology. The use of hemodialysis in some of the patients who develop acute renal failure can be of great importance

and it should be put into official treatment protocols due to its great number of advantages in renal function support.

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