

Oral Presentation - 36

Enhanced Elimination Methods in Treatment of Acute Methanol Poisonings: Continuous Hemodialysis / Hemodiafiltration *vs.* Intermittent Hemodialysis

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Abstract

Background: During an outbreak of methanol poisonings in the Czech Republic in 2012, we studied the comparative effect of intermittent hemodialysis (IHD) and continuous veno-venous hemodialysis/hemodiafiltration (CVVHD/HDF) on the treatment outcome in methanol poisonings.

Materials and Methods: Data were obtained from a retrospective case series study on 75 patients: IHD was used in 30 and CVVHD/HDF in 45 patients. The patients were treated with alkalization, antidotes (ethanol or fomepizole), folic/folinic acid, and hemodialysis.

Results: The groups of patients were comparable by age, time to diagnosis, laboratory data, clinical features on admission, and treatment measures. The difference in the number of survivors and dead between IHD and CVVHD/HDF was not statistically significant. There were more survivors without visual/CNS sequelae among the patients treated with IHD (67% vs. 42%, p=0.038).

Discussion: There was a significantly higher number of visual/CNS sequelae among the patients treated with CVVHD/CVVHDF as compared to IHD. This can possibly be explained by the smaller dialysate/blood flow and therefore slower elimination of formate, as well as a more delayed correction of the metabolic acidosis. The survival rate in the patients with severe metabolic acidosis (pH <7.0) and in the patients admitted in coma was not significantly influenced by the mode of hemodialysis.

Conclusion: Given an adequate circulatory status, IHD may have a better outcome as compared to a CVVHD, likely due to a faster elimination of the toxic metabolite formate, as well as a faster correction of the metabolic acidosis.