Effectiveness of correction of metabolic acidosis on intermittent versus continuous modes of hemodialysis in acute methanol poisoning

S Zakharov, T Navratil, D Pelclova, K E Hovda et al.
• **Background:** Severity of metabolic acidosis is a well-known prognostic parameter of outcome in acute methanol poisoning. Rate of acidemia correction may differ in different HD modalities.

• **Objective:** to study the rate of acidemia correction on intermittent (IHD/EDD) versus continuous modalities of dialysis (CVVH/HD/HDF).

• **Methods:** prospective study on 31 methanol-poisoned patients (IHD/EDD n=18, CVVH/HD/HDF n=13).

• **Measurements:** mean time of $S\text{-HCO}_3$ 1 mmol/L increase, mean time of arterial blood pH 0.01-unit change, mean rate of $S\text{-HCO}_3$ increase per hour, total time of $S\text{-HCO}_3$ correction.
Results

- Mean time to S-HCO$_3^-$ 1 mmol/L increase for IHD $0.19\pm0.03$ h versus $0.57\pm0.14$ h for CVVHD ($p<0.001$)
- Mean time to pH 0.01-increase for IHD $0.11\pm0.02$ h versus $0.19\pm0.06$ h for CVVHD ($p=0.024$)
- Mean rate of S-HCO$_3^-$ increase for IHD $5.7\pm0.9$ mmol/L/h versus $2.2\pm0.7$ mmol/L/h for CVVHD ($p<0.001$)
- No association with age, weight, serum methanol, glucose on admission
Conclusions

• Our study supports the superiority of IHD/EDD over CVVH/HD/HDF in terms of the rate of acidemia correction

• Further studies are necessary to demonstrate whether the modality of hemodialysis affects the mortality and long-term visual and CNS sequelae in methanol-poisoned patients

ACKNOWLEDGEMENTS
Supported with the Project of the Ministry of Health of the Czech Republic 9/15/NAP, the Projects of the Charles University in Prague P25/1LF/2, P26/1LF/2, and P28/1LF/6
Thank you for attention