

## **CVVHD technique taken for intermittent renal replacement therapy in children.**

M Cetiner, R. Büscher, E Tschiedel, C Okorn, B Kranz, KE Bonzel, PF Hoyer,  
Clinic of Pediatric Nephrology, University of Duisburg-Essen, Germany

Background: Continuous veno-venous haemodialysis (CVVHD) is a very smooth technique with a low flow rate of dialysis fluid (2L/hour/1.73 m<sup>2</sup> maximum) compared to intermittent haemodialysis with a high flow rate (30L/hour). We now used CVVHD technique also for intermittent HD therapy in very sick children with renal failure and delicate blood circulation if peritoneal dialysis was not feasible.

Methods: Regime: Intermittent CVVHD 4-8 hours daily or on alternate days. Equipment: Baxter/Edwards BM 11/15, extracorporeal blood volume 60-90 ml, bicarbonate haemofiltration fluid (Braun), heparin resp. citrate anticoagulation, Access: double lumen vena iugularis interna silicone catheter (PermCath( Quinton or Shaldon catheter).

Results: 4 pts., aged 0.7-12 years. Underlying disease #1: Atypical HUS with Denys Drash syndrome, #2: BOR syndrome, #3+#4 neuroblastoma resistant to therapy. - CVVHD duration 1 week-11 months, dialysis fluid flow rate 0.3-2 L/hour, blood flow rate 3-6 L/hour (50-100ml/min). Efficacy was sufficient, i.e. pt.#4 long term results: creatinine 2.8-4.9 mg/dl, BUN 23-55 mg/dl, K 3.8-6 mmol/l, P 2.9-5.9 mg/dl.

Conclusions: Especially in very young children with renal failure combined with diverse severe clinical burdens CVVHD - usually an continuous variety of dialysis techniques - has proven to be both effective and smooth for use in intermittent and even ambulatory blood purification treatment.

Metin Cetiner  
Clinic of Pediatric Nephrology  
University of Duisburg-Essen, Germany  
metin.cetiner@uni-duisburg-essen.de