

Outcome in critically ill neonates receiving continuous veno-venous haemofiltration (CVVH).

C Westrope [1], GC Morrison [1]

[1]Birmingham Children's Hospital, Birmingham, United Kingdom

Objective: To report the survival of neonates requiring CVVH.

Method: Neonates undergoing CVVH since 1997 were identified. Gestational age, weight, diagnosis and indication for CVVH were recorded for each patient. Pre-CVVH percent fluid overload ($FO\% = \text{cumulative fluid balance (L)} / \text{body weight (Kg)} \times 100$) and PRISM score were calculated. Outcome was measured in terms of survival to ICU, and, hospital discharge

Results: 24 neonatal episodes were identified. The median gestational age and weight of the patients was 37 weeks (range 32-42) and 2.7kg (range 1.3-4.7) respectively. All patients had multiple organ failure (median 3, range 2-5) at time of CVVH initiation. 6 patients with an inborn error of metabolism (IEM) required CVVH for removal of toxic metabolites. 18 patients received CVVH for one or more of the following; acidemia, electrolyte disturbance or fluid overload. 10 neonates (42%) survived to ICU discharge. 7 (29%) achieved hospital discharge. Neonates with an IEM had an ICU and hospital survival of 67% and 50% respectively. This compared favourably to the outcome of neonates with non-IEM diagnoses of whom 33% survived their ICU stay and 22% achieved hospital discharge. Pre-CVVH PRISM did not discriminate survivors from non-survivors $p=0.31$. $FO\%$ did not differ between non-survivors and survivors $p=0.15$

Conclusions: CVVH in neonates is associated with a poor outcome. Survival was not associated with a lower $FO\%$ as has been reported in previous paediatric studies.

Corresponding author:

GC Morrison

Birmingham Children's Hospital, Critical Care

Steelhouse Lane

B4 6NH Birmingham

West Midlands, United Kingdom

gavin.morrison@bch.nhs.uk

Phone: 00 44 121 333 9674

Fax: 0044 121 333 9651