Supplementary Material

Methods

Hemodialysis and hemodiafiltration procedures

All HD sessions were performed using Fresenius 5008 HD machines and were delivered as either high-flux HD or online HDF. Bicarbonate was used exclusively as a buffer, and ultrapure water used for dialysis and for replacement fluid in the case of online HDF. In 22 out of 24 patients Fresenius FX class high-flux dialysers were used (FX60, FX80, FX100). In the remaining two cases, dialysers used were Arylane H9 and Gambro Nephral 500ST. All patients were dialysed using an incremental HD algorithm whereby the target Kt/V was 1.2 and was considered the sum of dialysis two-pool eKt/V and the equivalent Kt/V provided by RRF, as described previously[1]. For online HDF, the HDF fraction was 0.35 of the plasma flow rate and target HDF volume was 40% of the Watson volume. Vascular access was via tunnelled vascular catheters or arteriovenous fistulas. Ultrafiltration was performed to achieve a clinically assessed dry weight.

Plasma sample analysis

Blood samples were collected in lithium heparin bottles (Vacuette®, Greiner-Bio, Frickenhausen, Germany), centrifuged, and stored at -80° C until the time of analysis. All samples were analysed for urea, creatinine, β2-microglobulin and cystatin C according to the manufacturer specifications in a Clinical Pathology Accreditation approved laboratory. Urea, creatinine and β2-microglobulin were measured using an Olympus AU640 (Beckman-Coulter, High Wycombe, UK). The specific methodology for these include colorimetric analysis (modified Jaffé method)

for creatinine and immune-turbidimetric for β2-microglobulin. The between-day assay coefficient of variation for β2-microglobulin was 4.8% at a mean concentration of 6.22 mg/l and assay calibration was performed before measuring all samples. External quality assurance was also performed routinely for this assay throughout the period of analysis and showed acceptable performance. Cystatin C was measured on the IMMAGE®800 (Beckman-Coulter, High-Wycombe, UK) immunoassay analyser using DakoCytomation cystatin C reagent (Dako Ltd, Cambridgeshire, UK) based on the non-competitive rate particle-enhanced nephelometric technology. Repeated analysis of patient samples showed <3 % inter-assay variation.

REFERENCES

1. Vilar E, Wellsted D, Chandna SM, Greenwood RN, Farrington K: Residual renal function improves outcome in incremental haemodialysis despite reduced dialysis dose. *Nephrol Dial Transplant,* 24**:** 2502-2510, 2009