EFFECTS IN HEMODIAFILTRATION THERAPY

ON-line haemodiafiltration (HDF) can efficiently remove uremic toxins, ranging from small- to large-molecular-weight toxins, by both diffusion and convection.

Therefore, Alb leakage during HDF is unavoidable when removing middle- and large-molecular-weight substances. In this study, we investigated the relationship of percentage reduction of Myoglobin, Procalcitonin and Beta2-microglobulin, supra-gle sessions and the two membranes examined. The change in serum Alb levels in 30 patients who underwent high-efficiency HDF (removal rates of 1-MG, 83% and 37%, respectively; amount of Alb leakage, 4.2 g/session) for 1 year was examined.

Thus, the present study confirmed that the removal of 2-MG and Alb separately is difficult even by a

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CONCLUSIONS:

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RESULTS:

Descriptive statistics showed a similar trend of each marker in all treatments. Mean concentrations of complement factors increased early in the treatment, C3a, C5a until 10 min and C3b9 until 60 min. Estimated C3a levels at 10 min did not differ statistically significantly when comparing FX100 vs xevonta Hi 23 or FX CorDiax 100, but vs FX CorDiax 1000, with lower estimates in CorDiax1000. All dialyser showed a similar course of C5a with a slightly higher increase in case of FX 100 compared to the other dialysers. Mean leukocyte counts decreased until 10 min, this change recovered again, the only statistically significant difference was found at 10 min between xevonta Hi 23 and FX100. PMN elastase increased during the first hour. TAT increased during the treatment, whereas thrombocyte counts decreased until 30 min, similarly with all dialysers. Compared to FX100 treatments, TAT had a less pronounced increase with the FX CorDiax 1000 or xevonta Hi 23 dialyser. Compared to FX100, mean AUC estimates of kallikrein were significantly lower with the xevonta Hi 23, but not with both FX CorDiax dialysers. No dialyser or treatment related adverse events occurred with FX 100, FX CorDiax 100 or FX CorDiax 1000 hemodialyser.

CONCLUSIONS: The similar courses of analysed markers during treatments support a comparable biocompatibility of studied dialysers. Some differences observed may be explained by more effective elimination of middle molecules when comparing FX100 vs new generation dialysers, or by patient factors of biocompatibility.

INTRODUCTION AND AIMS: A high-flux dialyser, incorporating an advanced polysulfone membrane offering a broad spectrum of uremic toxin elimination, has been introduced. The study aimed to compare biocompatibility profiles of four polysulfone haemodialysers, all applied in online haemodiafiltration (HDF).

METHODS: In this explorative prospective randomized crossover study, 24 adult patients were treated thrice weekly for one week each with high-flux dialysers FX 100, xevonta Hi 23, FX CorDiax 100 or FX CorDiax 1000, respectively, all on online postdialysis haemodiafiltration (HDF). Blood samples were drawn before, during and at end of treatment. Mean levels of haemocompatibility markers were calculated as well as predicted by linear mixed models with fixed effects for treatment, period interaction between treatment and period and a random subject effect. Estimates at 10 min of treatment (adjusted for pre-dialysis value), for the complete treatment [area-under-the curve (AUC)] or for relative changes (pre- to post-dialysis) were compared by dialysers (overall, and FX100 vs every other dialyser).

CONCLUSIONS: The similar courses of analysed markers during treatments support a comparable biocompatibility of studied dialysers. Some differences observed may be explained by more effective elimination of middle molecules when comparing FX100 vs new generation dialysers, or by patient factors of biocompatibility.