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Theme : Clinical Research on PD Fluids and Regimens

Improved blood pressure control with low-sodium PD fluid

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Objectives: It has previously been demonstrated that dietary sodium restrictions or increased fluid removal improves blood pressure control in PD patients. Increased sodium removal may also be obtained by reducing sodium in the PD fluid. The aim of this study was to investigate the effect of low sodium fluids on blood pressure and fluid status in PD patients.

Design: A multicentre, controlled, prospective, non-randomised crossover design with 40 patients on CAPD or APD was used. The patients were stabilised on their ordinary regime for one month (T0). The treatment period lasted for two months with sampling at 1 and 2 months (T1, T2). During the treatment period one bag per day was exchanged for a low sodium bag (102-115 mM). The reduced osmolality was compensated with glucose in group A but not in group B. Blood pressure (24-h ambulatory) and total body water (TBW) were among the investigated parameters.

Results: The results represent an intermediate analysis of 19 patients at T0 and T1. In group A, a significant decrease in TBW, systolic and diastolic ambulatory BP and mean arterial pressure (MAP) was observed, while no significant changes were seen in group B. No significant differences were observed at T0. [Fig. 1]

Conclusions: The present intermediate analysis indicates the possibility to improve blood pressure control and fluid status by reducing the sodium concentration in PD-fluids. Furthermore, the results suggest that it is important to maintain UF-volume (osmolality) by increasing glucose in the PD fluid.

Figure:

Fig. 1

