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Theme : Clinical Research on PD Fluids and Regimens

Longitudinal Changes In Inflammatory Status During The First Year Of Hemodialysis (HD) Or Peritoneal Dialysis (PD)

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While many studies have shown that chronic kidney disease is associated with increased systemic inflammatory activity, the exact cause(s) remain unknown. As several hypotheses implicate the dialysis procedure *per se* as an important contributor to inflammation, the aim of the present study was to investigate longitudinal changes in inflammatory status (measured as levels of hs-CRP) during the first year of PD or HD treatment. In a post-hoc analysis of patients that completed one year of therapy, 122 pts (either on PD [66 pts] or HD [56]) were evaluated close to start of dialysis treatment and again after about 12 months of dialysis treatment.

At baseline, the proportion of males (58 vs 68%, PD vs HD), age (54 ± 11 vs 53 ± 12 years), presence of malnutrition (by subjective global assessment, 32 vs 27%), cardiovascular disease (36 vs 31%) or diabetes (34 vs 32%) did not differ between both groups. The PD group had lower BMI (24.4 ± 3.94 vs 26.3 ± 4.8 Kg/m²; $p<0.05$) and higher GFR (6.7 ± 2.3 vs 5.5 ± 1.9 ml/min, $p<0.05$). The changes in inflammatory markers and BMI occurring in these patients during the first year of therapy are shown in table 1. Data are presented as mean \pm SD or median (IQR); MANOVA; Different vs baseline: * $p<0.05$; ¹n=62/54; ²n=63/48; ³n=50/48.

These results suggest that dialysis therapy *per se* may be one factor influencing inflammation biomarkers in dialysis patients. Factors associated with HD, such as frequent heparinization, may contribute to less inflammation in the HD group. Further studies are needed to confirm this hypothesis and to elucidate potential mechanisms.

Figure:

Fig. 1

[IMAGE]