

BODY COMPOSITION, HYDRATION, AND RELATED PARAMETERS IN HEMODIALYSIS VERSUS PERITONEAL DIALYSIS PATIENTS

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◆ **Aims:** Maintaining euvolemia is an important goal in patients on renal replacement therapy. However, adequate assessment of volume status in clinical practice is hampered by a lack of accurate measuring tools. A new multifrequency bioimpedance tool has recently been validated. This study compares volume status in peritoneal dialysis (PD) and hemodialysis (HD) patients in a single center.

◆ **Methods:** Body Composition Monitoring (BCM; Fresenius Medical Care, Bad Homburg, Germany) was performed in all patients on PD or HD without contraindication. PD patients were measured with a full abdomen; HD patients were measured at the midweek session, once immediately before and once 20 minutes after dialysis. Clinical overhydration was defined as an overhydration-to-extracellular water ratio of >0.15 .

◆ **Results:** Total body water, extracellular water, and intracellular water were 33.7 ± 6.9 L versus 31.8 ± 8.1 L vs 33.9 ± 6.7 L, 16.4 ± 3.9 L vs 15.3 ± 4.9 L vs 16.8 ± 3.3 L, and 17.1 ± 6.2 L vs 16.5 ± 4.6 L vs 17.2 ± 3.9 L in the pre-HD, post-HD, and PD patients, respectively ($p = \text{NS}$). In the pre-HD and the PD patients, overhydration was 1.9 ± 1.7 L and 2.1 ± 2.3 L, whereas post-HD this was only 0.6 ± 1.7 L ($p < 0.001$). Clinical overhydration was more prevalent in pre-HD and PD patients compared to post-HD patients (24.1% vs 22.3% vs 10%, $p < 0.001$). In multivariate models, overhydration was related to age, male gender, and post-HD status.

◆ **Conclusion:** Although much clinical attention is paid to volume status, 24% of patients still have clinically relevant volume overload. Implementation of a reliable and clinically applicable tool to assess volume status is therefore necessary. It is possible to obtain comparable volume status in PD and HD patients.

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