

Fan, S., *et al* (2012). **Extracellular volume expansion in peritoneal dialysis patients.** *International journal of artificial organs*, 35(5), 338-345.

Peritoneal dialysis patients are in risk of high cardiovascular mortality and the study is suggesting monitoring extracellular volume to lower the side effect incident. Patient group with expanded extracellular water (ECW) level show high ECW ratio and this is associated with low urine output, serum albumin and high c-reactive protein (CRP) level. Correlated to this level, the patient group was associated with loss of residual renal function, inflammation, malnutrition and hypertension. With this result, it is possible to tell that controlling ECW volume can be effective in peritoneal dialysis patients.

Davenport, A., & Willicombe, M. K. (2010). **Does diabetes mellitus predispose to increased fluid overload in peritoneal dialysis patients?.** *Nephron Clinical Practice*, 114(1), c60-c66.

Peritoneal dialysis (PD) patients with diabetes mellitus (DM) had increased fluid overload compare to other PD patients. Especially patients who had more than 7% of HbA1c level, which indicates severe DM, had significantly higher ratio of ECW ratio measured by InBody. This could be due to a loss of intracellular water (ICW), as albumin and CRP did not differ, it suggests that diabetic PD patients have an expanded ECW volume. Continuous fluid observation would be required for these patients.

Song, J. H., *et al* (1999). **Measurement of fluid shift in CAPD patients using segmental bioelectrical impedance analysis.** *Peritoneal dialysis international*, 19(4), 386-390.

The characteristics of fluid shift of each body segment in continuous ambulatory peritoneal dialysis (CAPD) patients during and after PD solution exchange were assessed by using the InBody. Impedance of both arms was significantly increased at 1 hour post exchange at all frequencies. In the trunk, impedance at all frequencies increased significantly after drainage, decreased significantly at 1 hour post exchange, and then increased again for the next hour. Impedance of both legs showed a decreasing tendency at all frequencies during and after

exchange. Each body segment of the CAPD patient has its own characteristic pattern of fluid shift in response to PD solution exchange or dwell. InBody may be a useful tool for understanding the physiological changes in fluid shift in CAPD patients.

Papakrivopoulou, E., *et al* (2012). **Comparison of Volume Status in Asymptomatic Haemodialysis and Peritoneal Dialysis Outpatients.** *Nephron Extra*, 2(1), 48-54.

The majority of haemodialysis (HD) patients gain weight between dialysis sessions and thereby become volume overloaded, whereas PD is a more continuous technique. Cardiovascular mortality and hypertension is increased with both treatment modalities.

Therefore, volume status in PD and HD were measured to determine whether PD patients are chronically volume overloaded, as a risk factor for cardiovascular mortality. Over-hydration was common in healthy stable PD outpatients, and ECW volumes in PD patients are not dissimilar to those of pre-dialysis HD patients. Fluid regulation is important for these patients as its overload may cause risk of cardiovascular diseases.

Okamoto, M., *et al* (2006). **Usefulness of a body composition analyzer, InBody 2.0, in chronic hemodialysis patients.** *The Kaohsiung Journal of Medical Sciences*, 22(5), 207-210.

The objective of the present study was to investigate whether InBody 2.0 might be useful in measuring the dry weight of chronic HD patients. The impedance index was determined at a low frequency (5 kHz) and correlated closely with ECW, using sodium bromide dilution as standard comparison. Patients with high ECW ratio had significant correlation with the hANP level ($p < 0.05$). It appears that the InBody 2.0, may be useful for estimating the dry weight in chronic HD patients.