F-A7

# Fluid Loss from Body Segments During Hemodialysis: Differences between Normohydration and Overhydration

Seoung Woo Lee, Soo Hyun Kwon, Wook Hyun Um, Seung Won Lee
Joon Ho Song, Moon Jae Kim

Division of nephrology and hypertension Dept of Internal Medicine Kidney Disease Research Group
Inha University College of Medicine

**Purpose** : It is unclear whether fluid is lost from each fluid compartment in a similar manner during hemodialysis in normohydrated and overhydrated patients.

**Methods** : The authors measured changes in regional body fluid compartments by using segmental multi-frequency bioelectrical impedance analysis before and after hemodialysis (HD) in 26 end-stage renal disease patients. Extracellular fluid (ECF)/total body water (TBW) ratios were measured in 5 body segments, i.e., right arm (RA), left arm (LA), trunk, right leg (RL), and left leg (LL), respectively. ECF/TBW ratio in whole body (ECF/TBWW) was derived from the sum of regional body fluid compartments. Patients were divided into normohydrated (NH) and overhydrated (OH) groups according to post-HD ECF/TBWW.

**Results** : Twelve patients were allocated to the OH group and 14 to the NH group. No differences were found between these two groups with respect to % decreases in body weight (BW), TBW, or intracellular fluid (ICF) levels. However, % decreases in ECF tended to be higher in the NH group. Correlation coefficients between UF amounts and % decreases of TBW, ICF and ECF were higher in the NH group than in the OH group. UF amounts were found to be correlated with % ECF/TBW decreases in all five fluid compartments in the NH group. However, UF amounts were only correlated with % decreases in ECF/TBWLA and ECF/TBWTrunk in the OH group. Positive correlations were found between UF amounts and % ECF/TBWRL decreases, regardless of age in the NH group only.

**Conclusion** : NH and OH patients show different patterns of fluid loss from regional body fluid compartments, which may be found useful for determining patient hydration status.