BLOOD PRESSURE AND FLUID OVERLOAD: EVALUATION IN INCIDENT ESRD PATIENTS

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Introduction and Aims: Patients with end stage renal disease (ESRD) have a very high risk of cardiovascular disease (CVD), which remains the first cause of death in dialysis patients. CVD doesn’t appear suddenly in patients undergoing dialysis treatment, but it begins in the earlier stages of chronic kidney disease (CKD), prior to the development of ESRD requiring renal replacement therapy (RRT). The high incidence of CVD in dialysis populations is likely to reflect chronic extracellular fluid overload (ECFO) developed in end stage kidney disease phase. The aim of this study is to evaluate fluid status via multi-frequency bioimpedance spectroscopy in a cohort of patients at the time of admission to hemodialysis, and to establish if the increased risk of CVD can be related to the high prevalence of ECFO state at the time of starting hemodialysis.

Methods: Data were collected in 37 dialysis units of NephroCare Italy using a prospective database (EuCliD®). 432 patients (pts) (age 66.2±14.5, 62.7% male) were admitted between October 1, 2011 and October 30, 2012. All underwent bioimpedance spectroscopy measurements with Body Composition Monitor (BCM) at the time of admission to evaluate their fluid status and predialysis blood pressure (SBP). Relative fluid overload (RFO) was measured for all patients and every patient with RFO > 15% was considered fluid overloaded.

Results: Table 1 shows the development of hydration status, mean post-dialysis body weight change compared to baseline (delta BW) and predialysis systolic blood pressure (SBP) during follow-up.

Conclusions: Serial evaluation of fluid volume status using the BCM supported dry weight assessment and was accompanied by a significant decrease in fluid overload level and in the proportion of patients with severe fluid overload, thereby contributing to facilitate control of systolic blood pressure.