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RESIDUAL RENAL VOLUME IS ASSOCIATED WITH VOLUME STATUS DETERMINED BY BODY COMPOSITION MONITORING IN PATIENTS WITH PERITONEAL DIALYSIS

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Fluid overload has been linked to mortality in peritoneal dialysis (PD) patients. Residual renal function is important for patient survival. Therefore, the objective of this study was to analyze volume status in PD patients, and to identify associations between volume status and residual renal volume. We performed a cross-sectional, observational, single-center study. Body composition was measured using a portable multifrequency whole-body bioimpedance assessment, and residual renal volume was measured. We examined 75 patients (66.7% male), with a mean age of 50.7 ± 13.0 years and mean body mass index of 23.5 ± 3.5 kg/m^2. Length of time on dialysis was 46.5 ± 37.9 months. Anuria (≤ 100 mL/day) is associated with relative overhydration (ROH) ($p=0.014$) and extracellular water volume ($p=0.014$). In a multivariable linear regression analysis, anuria (coefficient $\beta=0.217$, $p=0.025$), diabetes (coefficient $\beta=0.213$, $p=0.027$), and serum albumin level (coefficient $\beta=-0.533$, $p<0.001$) were independent significant parameters associated with ROH. In conclusion, residual renal volume is negatively associated with overhydration in PD patients. We suggest that preservation of residual renal volume is important to maintain volume status in PD patients.

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INCREASED FAT INTAKE MAY STABILIZED CKD PROGRESSION IN LOW-FAT INTAKE PATIENTS

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Dietary intervention is important in patients with chronic kidney disease (CKD). Low protein diet maybe beneficial in slowing progression of CKD. However, little is known about the association between CKD progression and the other dietary compositions. We perform a prospective study by using 24 -hr dietary recall to determine the dietary conditions and modify the inadequate nutrient intake in CKD patients within one year. Total 35 adult patients in CKD stage 3–5 were enrolled. The average daily intake of calories, proteins, fats and carbohydrates were 20.5 ± 7.4 Kcal/Kg/day, 0.7 ± 0.2 g/Kg/day, 0.5 ± 0.3 g/Kg/day and 3.1 ± 1.2 g/Kg/day in the study entry. Fats component accounted for only 24.3 ± 7.5 % of daily calories intake. After an observational period of 6 months, correction of fats intake by education was done in the later 6 months. The mean intake of calories and fats were increased to 24.9 ± 7.6 Kcal/Kg/day and 0.9 ± 0.3 g/Kg/day ($p=0.035$, 0.000 respectively) in the end. The slop of 1/SCr between first 6 months and later 6 months did not change significantly (-0.0016 *vs.* -0.0020, $p=0.872$). Serum cholesterol and triglyceride levels were within normal range.

Inadequate calories intake will induce excessive protein catabolism, which can cause accumulation of uremic toxins and acceleration of renal failure. Increasing fats intake is an easy way to achieve adequate calories acquirement and may stabilize the progression of CKD especially in low-fat intake patients.

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INTEGRATION OF A SPECIFIC NUTRITION PROGRAM INTO A COMPREHENSIVE PROGRAM OF THERAPEUTIC EDUCATION

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Nutritional education strategies should be included in a multidisciplinary team for therapeutic education (TPE).

We conduct a comprehensive program of therapeutic education for out-center hemodialysis patients. 5 education workshops were performed during dialysis sessions, every 15 days: Illness experience (psychologist), vascular access (nurses), medication management (pharmacist), nutrition management (dietitian) and final evaluation. A specific program of nutrition (EDAM project: Education of the dialysis patient for better food) was added using 3 specific tools: a companion guide for patients, a game of questions-answers about nutrition(Dialygame) and a guide for the health team to use the tools and conduct nutrition workshops.

64 pts agree to join the program and were compared with a control group of 61 pts who received standard information. Specific questionnaires were created associated with quality of life evaluation (KDQOL) and usual clinical and biological data were noted before and after the 5 sessions as a short-term evaluation. Final results were under evaluation.

We present a multidisciplinary TPE program which integrate a specific nutrition TPE and innovative nutrition tools will be shown.

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LONG TERM SURVEY OF BODY COMPOSITION IN HEMODIALYSIS PATIENTS USING THE BODY COMPOSITION MONITOR® (BCM)

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Since 2 years all 265 incident patients in self-dialysis units were included in a prospective study. Every 6-months, clinical and biological nutritional evaluation was associated to a BCM measure. 205 pts have a complete set of data at start (age 60 ± 16 years, BMI 25 ± 5 kg/m2, albumin 37 ± 4 g/L, prealbumin 0.32 ± 0.1 g/L, CRP median 5 mg/L), 135 pts at 6 mo and 56 pts at 2 years. Measures were performed before HD session to ensure stability and reproducibility of body fluid compartments by the same examiner. Lean and fat masses (lean tissue index: LTI, fat tissue index: FTI) were normalized by square body height and compared with a reference range derived from 2000 healthy controls, according to gender and age. 28% of pts had values of LTI below the 10th percentile. A linear correlation exists ($p<0.001$) between pre-dialysis creatinine level and LTI. Albumin or prealbumin were not predictive of sarcopenia. Prescribed post dialysis BW was underestimated in 25% of pts and 16% remain overhydrated. In stable patients repeated measures analysis reveal no significant variation of LTI even in case of reevaluation of BW and gain of BW is associated with fat mass increase. BCM is a simple tool in clinical practice to evaluate body composition and hydratation status and help to guide nutritional support.

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THE BODY WEIGHT CHANGE DURING THE FIRST YEAR OF HEMODIALYSIS IS A STRONG PREDICTOR OF PATIENT SURVIVAL

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Hemodialysis patients are exposed to a high risk of death. We report the influence of the body weight (BW) change (Δ) on the survival in an incident HD patient cohort.Between January 2000 to 2009, 251 patients (age=65,8 ± 14,8 y.o.; F/M=93/158; diabetes=36%) survived at least one year after HD onset and were followed for 44,9 months. The prescribed BW decreased by 6.5 ± 5% at Week 8 (W8) and then increased again. From W8 to W52, the BW Δ was $+1,9 \pm 7,4$%. According to the median of W52-W8 BW Δ (+2.35%), the Kaplan Meier analysis (see figure below) displayed a significant better survival in patients with a BW Δ above the median.