4 NUTRITIONAL STATUS OF MAINTENANCE HEMODIALYSIS PATIENTS WITH DIFFERENT AGES

Wenling Ye, Jie Ma, Meixue Li Peking Union Medical College Hospital, Beijing, China.

To investigate nutritional status and body composition in different ages of maintaining hemodialysis (HD) patients. 129 patients (male 62, female 67) with mean age 56.33±14.14 years on HD were divided into four groups with age under 40, 40-69, 60-69 and over 70 years. Body composition was evaluated with Multi-frequency bioelectric impedance analysis (BIA) and 83 healthy subjects, matched for age and sex, were as the control. In all patients, about 6.2% were underweight with body mass index (BMI) less than 18.5 Kg/m². The incidence of underweight were 0%, 6.2%, 4.8% and 11.1% in groups under 40, 40-69, 60-69 and over 70 years respectively. Serum Creatinine, ALB, pre-ALB and normalized protein catabolic rate (nPCR) were significantly decreased in patients over 70 years. The young patients under 40 years also displayed lower nPCR and CHO value compared with that of group 40-59 years. Body cell mass, lean tissue mass, lean tissue index and relative lean tissue mass in HD patients were significantly lower than that in age and sex matched control group. Meanwhile, fat mass, fat tissue index and relative fat were increase 20% than the control. They were less different between HD patients and controls in age of 40-59 years, however, difference significantly increased in other three groups and changes were most obvious in patients over 70 years. In conclusion, our study showed that nutritional status was significantly associated with the age in HD patients. Patients under 40 years and over 70 years old displayed much severe protein wasting and more fat tissue storage.

http://dx.doi.org/10.1016/j.krcp.2012.04.601

278 QUALITY OF LIFE AND NUTRITIONAL STATUS ASSESSED BY MULTIFREQUENCY BIOIMPEDANCE SPECTROSCOPY IN HEMODIALYSIS VERSUS PERITONEAL DIALYSIS PATIENTS

Somchai Yongesri, Pakapan Dinchuthai, Suriya Prongnamjai, Rachneeporn Cheunsuwan, Jiranuch Thammakumpee, Siriporn Tangjaturonrasami, Nattaphon Ananon
Burapha University Hospital Chonburi THAILAND

Bioimpedance spectroscopy with body composition model is a validated method to assess hydration and nutritional status in dialysis patients. The aim of this study is to compare quality of life, nutrition status and hydration status between hemodialysis and peritoneal dialysis patients.

There were 26 PD and 32 HD patients included in this study. Multifrequency bioimpedance spectroscopy were measured by BCM-body composition monitor (Fresenius medical care) device, the device provided body composition parameters including Lean Tissue index (LTI) Fat tissue index (FTI) and quantified over hydration status (OH). Quality of life was measured by WHOQOL-BREF questionnaire. Scheffe’s test was used for comparisons with p<0.05 was considered as statistically significant. All of body cell mass, lean tissue mass, lean tissue index and relative lean tissue mass in HD patients were significantly lower than that in age and sex matched control group. Meanwhile, fat mass, fat tissue index and relative fat were increase 20% than the control. They were less different between HD patients and controls in age of 40-59 years, however, difference significantly increased in other three groups and changes were most obvious in patients over 70 years. In conclusion, our study showed that nutritional status was significantly associated with the age in HD patients. Patients under 40 years and over 70 years old displayed much severe protein wasting and more fat tissue storage.

http://dx.doi.org/10.1016/j.krcp.2012.04.602

279 NUTRITIONAL STATUS ASSESSED BY BIOIMPEDANCE SPECTROSCOPY IN HYPOKALEMIC VERSUS NORMOKALEMIC CAPD PATIENTS

Somchai Yongesri, Suriya Prongnamjai, Pakapan Dinchuthai, Rachneeporn Cheunsuwan, Jiranuch Thammakumpee, Siriporn Tangjaturonrasami, Nattaphon Ananon
Burapha University Hospital Chonburi THAILAND

Hypokalemia is a significant problem in CAPD patients. The impact of hypokalemia on treatment outcome was not known. The study objective was to compare the nutritional status as measured by Multifrequency bioimpedance spectroscopy (BIS) and quality of life between peritoneal dialysis patients who has hypokalemia and normokalemia. There were 8 hypokalemic and 18 normokalemic PD patients in this study. BIS were measured by BCM-body composition monitor (Fresenius medical care) device, quality of life was measured by WHOQOL-BREF questionnaire. Levene’s Test was used for comparison and p<0.05 was considered as statistically significant. There was no difference in the co-morbidity, dialysis adequacy, blood pressure and food intake between groups. The quality of life between groups was not statistically difference. BIS showed comparable lean tissue index (LTI), fat tissue index (FTI), urea distribution volume and ECW/ICF water ratio. Patients in the normokalemic group had a non-significant higher percent OH/ECW than hypokalemic group.

http://dx.doi.org/10.1016/j.krcp.2012.04.603

280 FAVORED SERUM ALBUMIN LEVEL AND ICF VOLUME AFTER USE OF 1.1% AMINOACID BASED PERITONEAL DIALYSIS(PD) SOLUTION

Jong-woon Yoon, Myung-jin Choi, Ja-ryong Koo, Young-ki Lee, Jung-woo Hahm
Hallym university hospital, Chuncheon, Gangwon-do, South Korea

Aminoacid based PD solution (AAD) has been shown to induce positive nitrogen balance and improve nutritional markers of malnourished patients. But its effects on body fluid composition and various nutritional markers are contradictory. Nutritional markers may influence by patient’s ECF volume status. So we evaluate effects of AAD on nutritional markers and body composition by analysis using multi-frequency bioimpedance analyzer. 35 PD patients (>6months duration of CAPD) were prospectively randomized to 17 AAD(Nutrinol, one time use/day) and 18 CD group(keep their glucose based PD solution). After 3 months follow up, AAD group showed marginally increased blood weight and fat mass, decreased ECF volume(12.45±0.94 vs 12.10±0.57L, p=0.06), no changed ICF volume(22.2±0.9L vs 22.3±0.9L, p>0.05) and marginally increased drainage volume(8.77±0.76L vs 9.12±0.83L, p=0.09). AAD group also showed favored several markers include nPCR(1.59±0.07 vs 1.98±0.08, p=0.00), BUN and albumin level (3.54±0.11 vs 3.74±0.11, p=0.02). Although serum albumin level was increased, correction with ECF volume(albumin level X ECF volume) makes it no difference (43.45±2.13 vs 44.80±2.28, p=0.14). Furthermore △ albumin vs △ ECF showed negative correlation pattern(r=-0.46, p=0.07) that means serum albumin change was influenced by ECF volume change. In conclusion, AAD treatment improved markers of better nutritional status. However the change in serum albumin level was influenced by patient’s ECF volume status, which can partially explain contradictory effect of aminoacid based PD solution on serum albumin level.