These two groups were not different according to age, diabetes or cardiovascular event history but had a significant higher interdialytic weight gain and protein intake. In the Cox model analysis the patient overall mortality was related to age ($p < 0.0001$), to the W52W8 BW Δ ($p=0.017$), to the CRP level at W52 ($p=0.035$) and to serum albumin at W52 ($p=0.036$). Hence weight gain during the first year of HD treatment was found a strong predictor of survival in HD patients. It was associated with a better food intake whereas the patient case-mix was not different. These data highlight the need for understanding what drives food intake in dialysis patients and for careful nutritional follow-up and support in incident HD patients.

http://dx.doi.org/10.1016/j.krcp.2012.04.355

32
BODY WEIGHT CHANGE DURING THE FIRST YEAR OF HEMODIALYSIS IS INFLUENCED BY THE DRY WEIGHT QUEST

Charles Chazot, Patrik Deleaval, Anne-Lise Bernollin, Cyril Vo-Van, Guillaume Jean
NephroCare Tassin-Charcot, France

Fluid overload, high blood pressure (BP) and nutrition disturbances may improve after HD onset. However HD patients remain exposed to a high risk of death. We report the relationship between the dry weight quest and nutritional markers on the survival in incident HD patients.

Among a cohort including 308 patients stating HD therapy 251 (age=65,8 ± 14,8 y.o.; F/M=93/158; diabetes=36%) survived at least one year after dialysis onset and were followed for an average of 44,9 months. During the first 8 weeks, the prescribed BW decreased by 6.5 ± 5.6% and then started to increase again. From Week 8 (W8) to W52, the BW change (Δ) was+1,9 ± 7,4% (extremes:–24,6 to+28,2%). Serum albumin and nPNA changed respectively by+7.8 and+11.4%. (+7.6% vs–3.6%, p=0.0001). The initial W8-W1 BW Δ (expressed as % of the BW at HD onset) was significantly correlated with the systolic BP Δ at W26 and W52 (respectively $p=0.0007$ and 0.0033). It was also inversely correlated with the Δ in serum albumin and nPNA ($p=0.002$ and 0.04) but not with BW Δ between W8 and W52. The W52W8-BW Δ and the W52-W1-systolic BP Δ were significantly correlated (r=–0,14, $p=0.03$). When the patients were split in two groups according the median of systolic BP change (–20.8 vs +7.8%), the W52W8 BW Δ was significantly higher in the group of the larger systolic BP decrease (+3.3 vs +0.6%, $p=0.004$).

Hence weight gain during the first year of HD treatment that is a strong predictor of survival in our experience (reported in another abstract) is influenced by the dry weight quest. In our practice, the systolic BP decrease is related to fluid removal and is associated with better patient survival, opposite to the reverse epidemiology concept. Further studies using bioimpedance are necessary to confirm that an optimal fluid status may improve the nutritional status in HD patients.

http://dx.doi.org/10.1016/j.krcp.2012.04.356

33
A COMPARISON OF PROGRESSION OF CHRONIC RENAL FAILURE: LOW DOSE VS STANDARD DOSE KETOACIDS

Jin-Bor Chen [1], Ben-Chung Cheng [2], Tze-Wah Kao [2]
[1] *Kaohsiung Chang Gung Memorial Hospital and Chang Gung University College of Medicine, Kaohsiung, Taiwan*
[2] *National Taiwan University Hospital*

Purpose: It has been documented that a low protein diet (LPD) with ketoacid analogues (one ketosteril® /5 kg) can postpone dialysis therapy in chronic kidney disease. The purpose of the study was to compare the effects of residual renal function preservation between low dose (one ketosteril® /10 kg) and standard dose (one ketosteril® /5 kg) ketoacid analogues.

Methods: The study was a prospective, open-label, group-comparison design. The duration was 6 months. Patients were enrolled in two hospitals when the serum Cr more than 6 mg/dL (CKD stage 4,5). Then the enrolled patients were randomized to three groups, LPD, LPDK1 (LPD + standard dose ketosteril®), LPDK2 (LPD + low dose ketosteril®). The definition of LPD was 0.6-0.8 gm of protein/kg body weight/day. The comparable variables were routine hemogram, bio-chemistry data, iPTH, reciprocal Cr (1/Cr), (eGFR), UN/Cr levels in 24-hr urine (UUN/UCr). The measurements were performed in baseline and 6th month.

Results: Demographics of patients were LPD: 22 (M/F:10/12), 49.5 y/o, BMI 21.5 ± 3.3; LPDK1:21 (8/13), 53.6 y/o, BMI 22.7 ± 3.5; LPDK2:37 (15/22), 62 y/o ($p: < 0.0001$), BMI 25.8 ± 4.7 (p:0.001). The significant variables in the baseline between groups as follows: BUN 76.2 ± 26.9, 70.6 ± 17.6, 94.0 ± 25.7 mg/dL (p:0.001); Cr 8.8 ± 2.8, 8.0 ± 1.4, 8.7 ± 2.5 mg/dL (NS); K 4.4 ± 0.8, 4.7 ± 0.7 4.9 ± 0.8 mEq/L (p:0.047), albumin 4.6 ± 0.4, 4.5 ± 0.3, 4.0 ± 0.4 gm/dL ($p: < 0.001$). The levels of 1/Cr from baseline to the 6th month in LPD, LPDK1, LPDK2 demonstrated a significant decline: 0.13→0.11, slope −0.0032; 0.13→0.11, slope -0.003; 0.13→0.12, slope −0.002. However, levels of UUN/UCr and eGFR did not reveal significant changes. UUN/UCr: 5.76→5.88, slope 0.0195, 6.45→6.21, slope −0.0397, 6.27→6.57, slope 0.05. eGFR: 6.16→5.77, slope −0.065; 6.19→5.35, slope −0.12; 5.73→5.41, slope −0.053.

Conclusions: The 6-month observation study showed low dose ketoacid analogues combined with LPD had a beneficial effect to slow down renal function deterioration in CKD stage 4,5. However, the slope of 1/Cr levels in low dose ketoacid analogues was less than that in standard dose ketoacid analogues.

http://dx.doi.org/10.1016/j.krcp.2012.04.357

34
ANTI-INFLAMMATORY EFFECTS OF LOW PROTEIN DIET SUPPLEMENTED WITH KETO-AMINO ACID IN THE TREATMENT OF TYPE 2 DIABETIC NEPHROPATHY

Nan Chen, Yuanmeng Jin, Hong Ren, Jing Xu, Pingyan Shen, Xiaomin Huang
Department of Nephrology, Ruijin Hospital, Shanghai Jiao Tong University, School of Medicine, 200025, Shanghai, P.R.China

Recent clinical research strongly approves that low-protein diet supplemented with keto-amino acid can effectively delay progression of type 2 diabetic nephropathy (DN). Anti-inflammation is one of these effects, but the mechanism is still controversial. This study is designed to further explore roles of ketogenic diets in regulation of inflammation status of type 2 DN. Twenty-one patients with type 2 DN (mean age at 65.14 ± 7.34 years), were followed-up for 52 weeks in this study. All patients were in CKD stages 3–4 with glomerular filtration rates 26–55 ml/min/1.73 m2 and were all on a low-protein diet containing 0.8 g protein/kg BW per day and 30–35 Kcal /kg BW per day. The diet was randomly supplemented with keto-amino acids at a dosage of 100 mg/kg BW per day in 10 patients, who were assigned into Group II. Other 11 patients were assigned into Group I. At the end of this study, related clinical data showed there was a significant increase in the serum level of TNF-α which could mediate inflammation systemically in Group I (from 230.25 ± 54.34 to 332.11 pg/ml, $P < 0.01$), but non-significant increase in Group II (from 224.59 ± 41.24 to 253.41 ± 31.28 pg/ml, $P > 0.05$). The level of CRP, which is produced in response to inflammation, rose greatly in Group I (from 7.5 ± 1.07 to 20.4 ± 3.72 ug/ml, $P < 0.01$), but decreased in Group II (from 8.2 ± 3.07 to 3.9 ± 1.22 ug/ml, $P < 0.01$). The level of adiponectin, an anti-inflammatory factor, was decreased in Group I (from 9.42 ± 0.8 to 7.64 ± 1.4 μg/ml, $P < 0.05$), but showed slight increase in Group II (9.04 ± 0.9 versus 10.47 ± 1.2= μg/ml, $P > 0.05$). Nutritional markers including serum albumin, hemoglobin and basal metabolic index showed no malnutrition happened during the follow-up period. In conclusion, low-protein diet supplemented with keto-amino acids contribute to ameliorate inflammation in the progression of type 2 diabetic nephropathy through regulating inflammatory factors production, including TNF-α, CRP and adiponectin.

http://dx.doi.org/10.1016/j.krcp.2012.04.358

35
IMPACT OF DIETARY PROTEIN EXCHANGE 0N PATIENT'S COMPLIANCE, APPLICABILITY AND EFFICIENCY IN CHRONIC KIDNEY DISEASE

Wei Chen, Hai-long Li, Sai-nan Zhu
Peking Union Medical College Hospital

The application of Low Protein Diet (LPD) in the treatment of CKD has been more accepted by all medical stuffs nowadays. However, the diversity and complexity of therapeutic diet as well as being difficult to obtain more detailed consultation have caused poor long-term maintenance and compliance in most patients.To investigate patient's compliance to dietary therapy as well as the impact of Dietary Protein Exchange (DPE) on patient's compliance in CKD patients.To investigate patient's self understanding and prehension to educational resources on DPE in CKD patients.CKD patients are diagnosed in clinics from 6 hospitals according to the random digits table. 200 enrolled patients are randomly divided into test groups and control groups after signing the concent forms.Test groups:Face to face education of the utilization of new DPE as well as attentions in follow-up is conducted by