diaries were analyzed by dietitians. Serum cholesterol, albumin, calcium and phosphate and CO2CP (carbon dioxide combining power) were examined. The nPCR was used to assess the accuracy of DPI. Part 2: Pilot study: A two–year, non-randomized controlled trial was carried out. The inclusion criteria were (1) MHD > 3 years and Kt/V > 1.2; (2) no residual renal function; (3) Serum albumin > 35 g/l; (4) CRP < 3.25 mmol/l; (5) Hemoglobin > 90 g/l. Two groups were set: DPI > 1.2 g/ kg/day (NP group) and DPI < 1.2 g/ kg/day (LP group). Patients kept a serial three-day-dietary diary and assessed serum albumin, phosphate, cholesterol and CO2CP every 3 months. Part 1: 126 patients' diaries, which DPI from the three-day-dietary diary was similar to the nPCR, are analyzed. 99 patients' DPI was less than 1.2 g/kg/day with an average calorie intake of 26.93 ± 4.17 KCal/ kg/day. 27 patients' DPI was more than 1.2 g/kg/day with an average calorie intake of 29.46 ± 2.73 KCal/ kg/day. There was no difference on serum albumin. However, the patients in high DPI group have higher serum phosphate and lower CO2CP (TABLE 1). Part 2: The average DPI in LP group was 1.05 ± 0.11 g/kg/day with an average calorie intake of 26.65 ± 3.18 KCal/ kg/day. The average DPI in NP group was 1.34 ± 0.15 g/ kg/day with an average calorie intake of 29.1 ± 2.87 KCal/ kg/day. Serum albumin and cholesterol remained stable in both groups. Similarly, the patients in NP group have higher serum phosphate and lower CO2CP compared to LP group (TABLE 2). Conclusion DPI around 1.05 g/kg/day can maintain the nutritional status and ameliorate hyperphosphatemia and acidosis in Chinese MHD patients using low–flux dialyzers

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ADIPONECTIN,LEPTIN: FOCUS ON LOW-PROTEIN DIET SUPPLEMENTED WITH KETO ACIDS IN CHRONIC GLOMERULONEPHRITIS WITH HBV PATIENTS

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Leptin and adiponectin come from adipose tissue, which can reflect patients' inflammation and status of lipid metabolism. Our study is aim to evaluate the effects of short-term restriction of dietary protein intake (DPI) supplemented with keto acids on nutrition and lipid metabolic disturbance in chronic glomeruloneph-ritis with HBV patients. 17 patients were randomized to either low DPI with keto acid-supplemented (sLP) or low DPI (LP) group for 12 weeks. Low-protein diet (LPD) wasindividualized with protein intake of 0.6–0.8 g/kg/day and keto acids were supplied in 0.1 g/kg/day. Nutritional index other clinical index were measured to evaluate the effect and safey respectively. Serum levels of adiponectin, leptin were determined by ELISA assay.The urine protein excretion level was significantly decreased after 12 weeks in the sLP group compared to the basal value and the LP group (baseline:4.52 ± 1.74,4 weeks:3.19 ± 1.52 g,8 weeks: 2.19 ± 1.1 g,12 weeks:1.64 ± 0.77 g, $P < 0.05$).No difference was observed in serume creatinine, eGFR. Nutritional index was significantly improved at week 12 in the sLP group. 4 week later, Serum leptin of sLP decreased signficangly compared with baseline.[baseline: 4.99 (1.66, 11.44) ng/ml, 4 weeks: 2.29 (1.22,10.2) ng/ml;8 weeks: 1.8(1.18,5.07) ng/ml; 12 weeks: 1.38(0.88,2.55) ng/ml, $P < 0.05$]. The level of serum adiponectin in sLP raised after 8 week compared with the baseline and LP (baselin: 21.60 ± 4.78 pg/ml, 4 weeks: 22.30 ± 4.98 pg/ml, 8 weeks: 24.44 ± 4.43 pg/ml, 12 weeks: 25.11 ± 4.25 pg/ml, $P < 0.05$).

In conclusion: Short-term restriction of DPI 0.6–0.8 g of protein/ kg IBW/ day is safe, when combined with keto acids, is associated with decreased of urinary protein and improvement of lipid metabolism

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ASSOCIATION BETWEEN DAILY PROTEIN INTAKE AND OUTCOME EVENTS ONLY EXIST IN PATIENTS WITH INFLAMMATION ON PERITONEAL DIALYSIS

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Whether the association between decreased protein intake and raised risk for all–cause, cardiovascular death and peritonitis is confounded by inflammation status is unknown. This study aimed to explore the predicting role of daily protein intake (DPI) in above outcome events in patients with and without inflammation respectively. Our study enrolled 305 incident patients who could be followed regularly. Demographic data was collected at baseline. Biochemical, dietary and nutritional data, dialysis adequacy were measured at the baseline and thereafter at regular intervals. A total of 127 patients died during the 44.5-month follow-up. Total 129 first-episode peritonitis were observed. Patients with high tertile of baseline DPI had significantly higher serum albumin, prealbumin, hemoglobin, lean body mass and hand grip strength compared to low tertile group ($P < 0.05 \sim 0.001$). They also had significantly lower risk for all–cause, cardiovascular death and first-episode peritonitis than low tertile group adjusted for commonly recognized confounders. When the whole cohort was divided into two groups according to the C-reactive levels higher or lower than 3 mg/L, the predicting role of baseline DPI only existed in patients with inflammation status.Conclusions: The decreased DPI predicted the increase risk for all-cause and cardiovascular death, and the first-episode peritonitis only in PD patients with chronic inflammation. The target of DPI may differ for patients with and without chronic inflammation

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ENERGY EXPENDITURE, ENERGY INTAKE AND NUTRITIONAL INDICES IN CHINESE PERITONEAL DIALYSIS PATIENTS

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The estimated energy expenditure is critical for prescribing an appropriate energy intake for dialysis patients. Unfortunately, it is often higher than actual energy intake from a single-point measurement. It is hypothesized that the difference might be reduced with repeated measurements. A total of 206 clinically–stable patients on peritoneal dialysis longer than 3 months were studied. Dietary protein and energy intakes were measured repeatedly and time-averaged values were calculated. Energy expenditures were estimated from Harris-Benedict, Schofield and WHO formulas. Other nutritional indices included anthropometric, biochemistry, lean body mass from DEXA and hand grip strength. The time-averaged normalized protein and energy intake were 0.86 ± 0.14 g/kg/d, 28.24 ± 4.40 kcal/kg/d. The estimated energy expenditures were significantly higher than actual energy intake calculated by above formulas with differences of 369.35, 433.26 and 469.99 kcal/d respectively. When patients were divided into three groups according to the tertile of differences between estimated energy expenditure from Harris–Benedict equation and actual energy intake, we did not observe any differences in serum albumin and prealbumin, lean body mass measured by DEXA, and hand grip strength between groups. Conclusions: The estimated energy expenditure from above formulas still surpassed the actual energy intake even though it was measured repeatedly in well-trained PD patients. The appropriate equations of energy expenditure should be derived from dialysis population specifically

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SEASONAL VARIATION OF BLOOD PRESSURE IS NOT ASSOCIATED WITH DIETARY ACID LOAD IN PERITONEAL DIALYSIS

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Seasonal variation of blood pressure is a common phenomenon in dialysis patients. The potential mechanisms are not verified. Whether dietary acid load plays an importance role in seasonal variation of blood pressure is unknown. A total of 181 clinically-stable patients who had been on peritoneal dialysis(PD) more than 3 months were studied between June, 2011 and Nov, 2011, i.e summer to autumn, when seasonal variation of blood pressure represented most obviously. Blood pressure and dietary nutrients intakes were measured monthly and time-averaged values calculated for summer and autumn respectively. Dietary acid load was estimated by NEAP: NEAP (mEq/ d)=54.5*protein (g/d)/potassium (mEq/d)-10.2. Other biochemistry and dialysis adequacy was examined also. With the cold season coming, systolic and diastolic blood pressure (SBP and DBP) increased, SBP129.2 ± 16.8mmHg vs 133.9 ± 15.6 mmHG and DBP 76.8 ± 10.5 mmHg vs 78.7 ± 10.1mmHg respectively. Similar trends were observed in body weight, total fluid removal via dialysate and urine, and all dietary nutrients intakes including NEAP values. However, the differences in SBP and DBP between autumn and summer were not associated with the differences in NEAP and dietary nutrients intakes. Conclusions: The increased nutrient intakes including dietary acid load could not explain the seasonal variation of blood pressure in PD patients. Other potential causes still need to be determined.

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