meet their Recommended Daily Allowance (RDA) for VitD. An observational study was conducted to examine serum 25-OHD levels in relation to 3-day diet analysis, supplementation, anthropometrics and nutritional status (using Malnutrition Inflammation Score (MIS)) in 81 HD patients. Sixty-nine completed 3-day dietary intake records (1 dialysis day, 1 non-dialysis day, 1 weekend-non-dialysis day). Mean dietary VitD intake of the group was 2.5 μg/day SD ± 3.6, which is less than 15% of RDA of ~17 μg/day. Only 2 out of 69 subjects (3%) met the RDA for VitD with mean intakes of 20.8 ± 2.6 μg/day that corresponded with mean serum 25OHD of 43.5 ± 17.6 nmol/L. Mean serum 25OHD levels for the group were 42.4 ± 23.1 nmol/L, with 19 classified as deficient (28% < 27.5 nmol/L), 43 insufficient (62%=27.5–75 nmol/L) and only 7 sufficient (10% > 75nmol/L) in terms of 25OHD levels. 20 of the 69 (29%) took a VitD supplement and had significantly higher serum 25OHD than ones who did not take any (53.7 ± 17.3 nmol/L vs 38.7 ± 22.4 nmol/L, p-value=0.013). Multiple regression analysis revealed dietary calcium (p=0.001), and dietary protein (p=0.006) were positively related and HD-vintage (p=0.037), inversely related to dietary VitD whereas total kilocalories, dietary phosphate, MIS and dry body mass did not relate to it. Thus, inadequate intake of VitD is a common (97%) and modifiable risk factor for hypovitaminosis D in HD patietns. Factors affecting reduced intake of VitD in our patients included dietary protein and calcium but not dietary phosphorous. VitD levels were low even in the face of adequate VitD intake through supplementation and/or dietary sources, and would need monitoring if target levels are to be met by the renal dietitians and nephrologists.

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PHYSICAL PERFORMANCE AND BODY COMPOSITION IN MAINTENANCE HEMODIALYSIS (MHD) PATIENTS

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Background: MHD patients (pts) often display protein-energy wasting, sarcopenia & diminished physical performance. This study was undertaken to assess the relationship between body composition & physical performance in MHD pts.

Methods: Body composition, assessed by dual energy x-ray absorptiometry and body mass index (BMI), were compared to 3 measures of physical performance: 6-minute walking distance (6-MW), sit-to-stand testing and stair climb. 52 clinically stable MHD pts (≥ 6 mo) and 21 matched normal controls were examined in this ongoing study.

Results: Pts were 53 ± 13SD yrs, 33% female; 38% diabetic; dialysis vintage was 62 ± 52 months. Normals were 52 years and 43% female. MHD pts had higher % body fat than Normals. 6-MW and sit to stand cycles were much lower in MHD men and women than in Normal men and women. 6MW in MHD and Normals were 445 vs 630 meters, respectively (p < .001). In men but not women, time to climb 22 stairs was greater in MHD pts then in Normals (p=.03). Unadjusted analyses in MHD indicated that 6-MW distance correlated negatively with lean body mass index (LBMI, kg of LBM/m^2; r=-0.37; p < 0.01) and % body fat (r=-0.33; p= 0.02); stair climb time correlated negatively with lean leg mass (r=-0.32, p=0.03) and total leg mass (r=-0.29, p=0.045).). Sit-to-stand did not correlate with any body composition measure. 6-MW adjusted for age and gender correlated negatively with LBMI (r=-0.29; p=0.04).There were no associations between BMI (range, 19.8-44.2 kg/m^2) and physical performance.

Conclusions: These findings indicate that adult MHD pts had a higher % body fat. Measures of physical performance were markedly reduced in MHD pts as compared to Normals. Physical performance in MHD, measured especially by 6-MW, correlated negatively with some measures of body composition, particularly with LBMI.

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EFFECT OF NUTRITIONAL STATUS AT DIALYSIS INTIATION ON PATIENT SURVIVAL

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Better nutritional status and early initiation of dialysis had been considered one of the most important methods for better prognosis of dialysis patients. In this study, we analyzed the effects of nutritional status, renal function at the start of renal replacement therapy (RRT), and co morbidity on 12-month survival of ESRD patients. The subjects in this study were 9695 new ESRD patients who started RRT in 2007 in Japan. The average age of the subjects was 67.5 years, 64.1% of the subjects were male, and 42.9% had diabetes. During the 12-month period after the start of RRT, 1546 patients died, and 35 patients received renal transplantation. Average estimated glomerular filtration rate (eGFR) at the initiation of dialysis was 6.52+ 4.20 mL/min/1.73 m2. Average serum albumin was significantly higher (P < 0.001) in survivor (3.3+0.6 g/dl in survivor and 2.9+0.7 g/dl in expired patients) at the initiation of RRT. One-year odds ratio (OR) of mortality in patients with eGFR more than 4–6 ml/min/1.73 m^2 was increased with increased eGFR at dialysis initiation, but OR was identical among the groups with eGFR less than 4 ml/min/1.73 m^2. Not only patients with sufficient residual renal function at the initiation of dialysis, but also patients with low nutritional status at the initiation of dialysis showed poor survival.

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EFFECT OF KIMCHI INTAKE ON LIPID PROFILES AND BLOOD PRESSURE

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Kimchi is a Korean fermented vegetable and has recognized as a healthy food. Some interventional studies have reported an inverse association between kimchi intake and higher lipid levels in healthy and obese people. However, kimchi intake and hypertention were still uncertain. This study is carried out to investigate whether the serum lipid profiles and blood pressure would be influenced by the amount of kimchi intake. Design for the clinical study by controlling the meal consumption and physical activity of the subjects for 7 days was approved by IRB at P Hospital (No.2011075). For the study, 100 volunteers assigned into 2 groups, low (15 g/day, n=50) and high kimchi intake group (210 g/day, n=50), temporarily stayed together at the dormitory during the 7-day experimental period. Three meals with different amount of kimchi were provided and subjects were asked to maintain the normal physical activity as usual. Significant decrease in the concentration of fasting blood glucose, TG, total-C, and LDL-C for the both group was observed after 7 days of kimchi intake regardless of amount of kimchi intake. Only FBG suppression effect was significantly different (p < 0.01). Furthermore, people with hypercholesterolemia (≤ 19 mg/dL) showed greater improvements in total cholesterol levels in high kimchi intake group. One notable finding in this study was that urinary Na excretion for the high kimchi intake group was significantly increased (p < 0.05). There was no significant difference in the BP reductions by kimchi intake. Higher intake of kimchi appears to be a modest beneficial effect to lipid lowering, without any effect on blood pressure in spite of increased sodium excretion. Long-term study should be clarified whether kimchi intake associated with hypertension.

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WHICH PREDICTIVE EQUATION OF RESTING ENERGY EXPENDITURE HAS THE BEST AGREEMENT WITH INDIRECT CALORIMETRY IN ELDERLY PATIENTS ON HEMODIALYSIS?

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As the incidence of elderly patients initiating dialysis has been increasing, there is a need to develop specialized care to them. According to the European Best Practice Guideline, the energy needs of hemodialysis (HD) patients should be estimated by multiplying the resting energy expenditure (REE), obtained by predictive equations, for the physical activity factor. The predictive equation that yields better agreement to the indirect calorimetry in elderly patients on HD has