Protein Energy Malnutrition in PD Patients

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Protein energy malnutrition (PEM) is common in patients with ESRD. PEM is an important predictor of morbidity and mortality. The prevalence of PEM was estimated with to range from 18% to 56% in patients receiving CAPD. The Pathogenesis is multifactorial, in addition to a variety of factors such as acidosis, insulin resistance, uremic toxin, loss of protein and amino acids as well as anorexia involved in development of PEM. There is increasing evidence of strong association among malnutrition and inflammatory process. Routine nutritional screening and assessment at the start of dialysis therapy should be performed by using such as user friendly tools as SGA, biochemical marker, bioimpedance and malnutrition score.

Various strategies have been proposed to improve dietary nutrient intake in patient on dialysis but actual intake is frequently below the recommendation. A cost-effective approach would appear to include an expert dietitian on the staff on every unit. If food intake is decreased because of anorexia, BCAA supplements (12 g/d) may be used safely without the risk for adverse effects. Acidosis should be accurately prevented. Sufficient evidence exists to recommend long-term oral administration of low-dose sodium bicarbonate (2 to 3 g/d) to prevent metabolic acidosis. Although GH increases nitrogen balance, dietary protein use and serum and IGF-1 levels, a significant long-term improvement in anthropometric and nutritional parameters usually not observed. Possible strategies for reversing the cytokine-dependent inflammatory process in PD patients include anti-cytokine antibodies and such as drugs as steroids, pentoxifylline, statin and ACE inhibitors. Based on nitrogen balance studies, AA-containing dialysis solutions can bring about improvement in the nutritional state of CAPD patients with low DPI. For optimal utilization, the administration of intraperitoneal AAs should be accompanied by simultaneous intake of food containing sufficient calories.

Despite the improvement made to dialysis techniques, the nutritional condition of patients on dialysis remains a cause for concern. Early initiation and adequate doses of renal replacement therapy, rapid treatment of reversible inflammatory processes, ensuring and adequate nutrient intake, and prevention of academia should be used to prevent and treat PEM.