Abstract

Nutritional support in acute renal failure must take into account the patient’s catabolism and the treatment of the renal failure. Hypermetabolic failure is common in these patients, requiring continuous renal replacement therapy or daily hemodialysis. In patients with normal catabolism (urea nitrogen below 10 g/day) and preserved diuresis, conservative treatment can be attempted. In these patients, relatively hypoproteic nutritional support is essential, using proteins with high biological value and limiting fluid and electrolyte intake according to the patient’s individual requirements. Micronutrient intake should be adjusted, the only buffering agent used being bicarbonate. Limitations on fluid, electrolyte and nitrogen intake no longer apply when extrarenal clearance techniques are used but intake of these substances should be modified according to the type of clearance. Depending on their hemofiltration flow, continuous renal replacement systems require high daily nitrogen intake, which can sometimes reach 2.5 g protein/kg. The amount of volume replacement can induce energy overload and therefore the use of glucosere free replacement fluids and glucosefree dialysis or a glucose concentration of 1 g/L, with bicarbonate as a buffer, is recommended. Monitoring of electrolyte levels (especially those of phosphorus, potassium and magnesium) and of micronutrients is essential and administration of these substances should be individually tailored.

Keywords

Acute renal failure, Nutritional requirements, Extrarenal clearance.