Qualitative Consideration of Dietary Protein in Low Protein Diet

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It is needed to consider the quality of dietary protein, namely amino acid composition in patients, especially in those with renal disease who take protein restricted diet in spite of protein loss in the urine.

We studied the amino acid composition of the serum by high tension paper chromatography. In renal disease, various amino acids such as threonine, phenylalanine, tryptophan, cystine, valine, leucine and isoleucine were decreased.

Thirty patients with chronic renal failure were treated with low protein diet (20-25 g. protein, 8-10 g. NaCl and 2,000 cal.) for 2 to 18 months. Fairly good results were observed in 22 cases, such as decreased NPN and PO₄ and increased HCO₃ of blood serum. No particular changes were seen in blood pressure, glomerular filtration rate or serum protein in the dietary regimen.

Since three years ago, we improved the amino acid composition of the diet, and increased the protein score from 63 to 76. A slightly better effect on azotemia was noted with the new dietary receipt of proteins restriction.