

ABSTRACT

MIXTURE OF CARBOXYLIC ACIDS FOR TREATING PATIENTS WITH KIDNEY FAILURE

Currently the treatment for patients with end-stage renal disease (stage V) consists of renal replacement therapy (hemodialysis, peritoneal dialysis or renal transplantation), extraordinarily expensive entailing poor quality of life. Our invention is a mixture of carboxylic acids: citric acid, succinic acid, fumaric acid and malic acid, and any possible combinations thereof. This product is preferably used orally or also intravenously, in the treatment of patients with chronic renal failure, hyperammonemia or human conditions having negative nitrogen balance. This product is beneficial in decreasing the serum values of urea and serum ammonium, while promoting by transamination of the oxalacetate formed via succinate, fumarate and malate, the biosynthesis of non-essential amino acids; by transamination of the alpha ketoglutarate formed via citrate, it generates glutamic acid and related amino acids such as glutamine. This treatment prevents, preserves and even improves kidney function. In other patients it delays deterioration of renal function and the urgent need for renal replacement therapy. In others, it is used as a supplemental renal replacement treatment to improve the patient's quality of life and improve laboratory parameters.

(Figure 3.)