INTRODUCTION AND AIMS: Protein malnutrition is common in dialysis patients and results in bad prognosis and reduced quality of life. Loss of appetite, depression and exercise deprivation are additional factors which influence rehabilitation results in dialysis patients group. Protein malnutrition depends on many factors and is a complex process with bad prognosis. The aim of the study was early identification of severe malnourished patients in the dialysis clinical centre (220 patients) and prospective observation of identified (n=36) malnourished patients and their nutritional status after three-month long nutritional intervention (enteral and parenteral nutrition between dialysis procedure).

METHODS: Prospective study in 220 patients from a single unit centre study has been done and 36 dialysis patients were found to be extremely malnourished. Clinical data, laboratory biochemistry, malnutrition inflammation score and body mass composition with bio-impedance were regularly measured. After diagnosing malnutrition nutritional interventions were started. It included oral nutritional supplement (taken on days without haemodialysis) and parenteral amino acid infusion 500ml during dialysis procedure three times per week. 21 out of 36 malnourished patients completed the study. Malnutrition inflammation score (MIS) and body mass composition before and after nutritional interventions were measured and data compared.

RESULTS: Malnutrition inflammation score has improved after intervention 14.2 +/- 3.9 to 11 +/- 5.0, p = 0.094. Phase angle (PA) value, which serves as a prognostic marker, is extremely low in our group of patients and did not change after nutritional interventions 2.79 +/- 0.9 to 2.76 +/- 0.88, p = 0.8779. We did not find any correlation between MIS and PA in malnourished group of patient in contradiction to our previous results on the whole group of dialysis patients. Increasing results of MIS does not mean better survival. Statistically the only positive result of our nutritional interventions was increased value of albumins from 26.19 +/- 12.48 g/l to 33.05 +/- 3.38 g/l, p = 0.0025.

CONCLUSIONS: In this study nutritional interventions in severe malnourished dialysis patients appeared to be inefficient. Values of both PA and MIS were so low that small increase in MIS value is expected not to increase survival rate in severe malnourished dialysis patients.