A. NUTRITION IN CKD

INTRODUCTION AND AIMS: Recent studies suggest hypoproteic diet (LPD) supplemented with ketoanalogues of essential aminoacids (sLPD) to reduce proteinuria. This unicentric prospective interventional trial aimed to assess the effects of sLPD on nephrotic-range proteinuria in patients with Diabetic Kidney Disease (DKD).

METHODS: Adult diabetic patients (452) with stable CKD stage 4+, proteinuria >3 g/g creatininuria and SGA A were enrolled in a run-in phase (3 mo), with LPD (0.6 g/kg dry ideal bw). Those who proved adherent (92, 64% males, median age 55.7 yrs, 65% on insulin) received sLPD (Ketosteril®, 1 tablet/10 kg) for 12 mo. Monitoring and treatment followed the Best Practice Guidelines. The primary endpoint was proteinuria during intervention as compared to pre-enrolment. Level of kidney function, blood pressure, blood glucose control and metabolic disturbances of CKD were secondary efficacy variables. Nutrition, inflammation (SGA, BMI, serum albumin, CRP) and compliance were safety parameters.

RESULTS: Proteinuria (g/g creatininuria) decreased from 5.2 (5.0–5.2) before enrolment to 1.6 (1.4–1.7), a reduction of 3.5 (>3.8 to >3.4). The rate of decline in eGFR (mL/min/1.73 m²) decreased from 0.5 (-0.6 to 0.5) to -0.11 (-0.14 to -0.09) during sLPD. BMI decreased, with no change in glucose control or SGA. Serum albumin (g/dL) significantly increased [4.1 (4.1–4.2) versus 3.9 (3.9–4.0)], while CRP (mg/L) decreased [9 (8–9) versus 14 (13–14)].

CONCLUSIONS: In patients with DKD and severe proteinuria, sLPD was associated with a 69 (63–82)% reduction in proteinuria. Although ameliorated, BP control, the decline in renal function, BMI and inflammation appeared unrelated to proteinuria, suggesting the role of plurifactorial approach.