Adherence To Low Salt Diet In CKD Patients Following Dietary Consultation In a Community Nephrology Clinic

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Background

Despite existing guidelines, dietary sodium intake among patients with chronic kidney disease (CKD) often exceeds the recommended limit. Dietary sodium may have a significant effect on proteinuria, hypertension control, efficacy of antiproteinuric therapy, the maintenance of optimal volume status and CKD progression. This study evaluated the long-term effect of dietary recommendations on salt reduction in CKD patients.

Methods

Thirty-one patients with CKD 1 to CKD 4 were retrospectively tested over a period of 3 years. Patients were included if they had a baseline urine collection before dietary consultation, and at least 2 urine collections during the first 2 years following the dietary consultation. A single dietary consultation towards lowering sodium intake was given by a nephrology-specialized dietitian, with emphasis on the sodium content of processed food products.

Results

There were 27 males and 4 females. The average age was 70.3±10.8 years. eGFR (MDRD) was 53.3±34.2 ml/min/1.73m2.

Mean urine sodium excretion at baseline was 223.8±74.0 meq/24 hrs, corresponding with 5.3 gr sodium. At 4.3±2.4 months following the dietary consultation, urine sodium excretion decreased by 24% to 166.2±50.6 meq/24 hrs ($p<0.0001$ compared with baseline). At 11.1±5.2 months urine sodium excretion was 156.0±59.5 meq/24 hrs ($p<0.0001$ vs. baseline) (Fig 1)

Mean BMI decreased from 31.2±5.0 kg/m2 to 30.7±4.8 kg/m2 ($p=0.007$) at 4 months and to 30.3±4.2 kg/m2 (p=ns) at 11 months (Fig 2).

eGFR (Fig3) and normalized Protein Nitrogen Appearance (nPNA) did not change (Fig 4).

Results

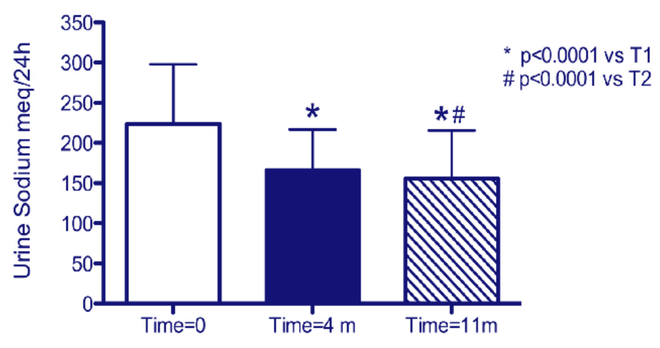

Fig 1. Urinary Sodium Excretion

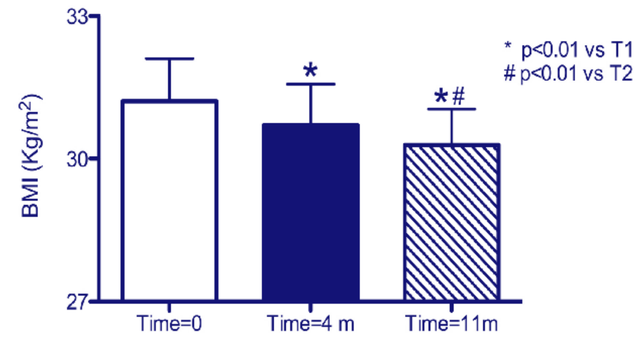

Fig 2. Body Mass Index (BMI)

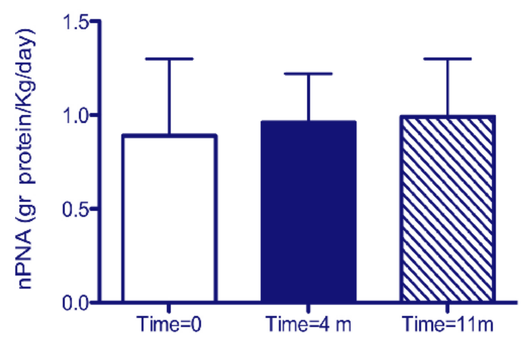

Fig 3. normalised Protein Nitrogen Appearance (n PNA)

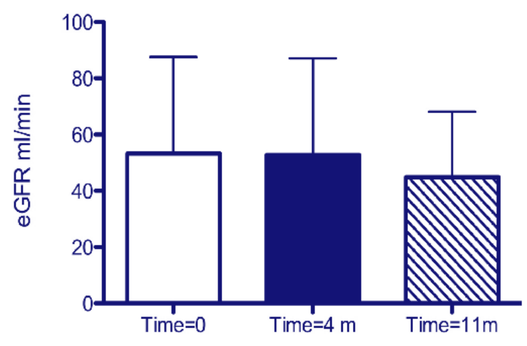

Fig 4. Es0timated Glomerular Filtration Rate (e GFR)

Conclusion

A long-term adherence to low sodium diet may be achieved in CKD patients following one intervention by a nephrology-specialized dietitian.

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