Design and method: We selected adult subjects from a tertiary hospital with an eGFR > 60 mL/min/1.73m² who had an outpatient 24-hour urine collection between 1998–1999 and > 1 24-hour urine collection during follow-up. We estimated urine K⁺ excretion and Na⁺/K⁺ ratio at baseline and during 1-, 5- and 15-year follow-up. We used Cox regression analysis to assess the association between K⁺ excretion and Na⁺/K⁺ ratio, and cardiovascular (CV) events or mortality, and end-stage renal disease (ESRD) or mortality.

Results: We included 541 subjects aged 47 ± 14 years of whom 47% were male. We analysed 7,885 24-hour urine samples. Mean K⁺ excretion (74 ± 30 mmol) and mean Na⁺/K⁺ ratio (2.5 ± 1.2) were similar at baseline and follow-up. However, compared to baseline, individual K⁺ excretion was > 20% different in half of the subjects when using 1/5/15-year estimates (Fig A). As a result, 43–48% changed from K⁺ excretion tertile or urine Na⁺/K⁺ ratio tertile when estimates were based on longitudinal data instead of baseline data (Fig C-D). We recorded 113 CV events, 83 ESRD cases and 87 deaths. Although no associations between K⁺ excretion or Na⁺/K⁺ ratio and CV or renal outcomes were observed using baseline estimates, a single 24-hour urine collection is insufficient for estimation of long-term K⁺ intake or urine Na⁺/K⁺ ratio and the associated CV and renal risk.

Conclusions: A single 24-hour urine collection is insufficient for estimation of long-term K⁺ intake or urine Na⁺/K⁺ ratio and the associated CV and renal risk.

EFFECT OF SALT INTAKE ON PLASMA AND URINARY URIC ACID LEVELS IN CHINESE ADULTS: AN INTERVENTIONAL TRIAL

Y. Wang1, C. Chu1, K-K. Wang1, J-W. Hu2, Y. Yan1, Y-B. Lv1, Y-M. Cao2, W-L. Zheng1, X-L. Dang1, J-T. Xu3, W. Che4, Z-Y. Yuan1, J-J. Mu1. 1Department of Cardiology, First Affiliated Hospital of Medical School, Xi an Jiaotong University, Xi An, CHINA, 2Department of Clinical Laboratory, First Affiliated Hospital of Medical School, Xi an Jiaotong University, Xi an, CHINA

Objective: Uric acid (UA) has been proposed as an important risk factor for cardiovascular and renal morbidity. We conducted an interventional trial to assess the effects of altered salt intake on plasma and urine UA levels and the relationship between UA levels and salt sensitivity in humans.