

P323

## P323 -Assessing the effectiveness of a modified X-PERT programme on dietary patterns in patients with diabetes and end stage renal disease (ESRD)

Miss Sandra Tan<sup>1</sup>, Dr Rachel Gibson<sup>1</sup>, Ms Lina Johansson<sup>2</sup>, Ms Nevine El-Sherbini<sup>2</sup>

<sup>1</sup>Department of Nutritional Sciences, School of Life Course Sciences, King's College London, Stamford Street SE1 9NH, London, United Kingdom, <sup>2</sup>Imperial College Healthcare NHS Trust, Hammersmith Hospital, Dept Nutrition and Dietetics, Du Cane Road, W12 0HS, London, United Kingdom

**Background:** Nutrition plays a major role in the progression and management of chronic kidney disease (CKD). Currently, dietary guidelines for patients with CKD focus on dietary restrictions of individual nutrients such as potassium, phosphate and protein to manage the complications of kidney disease. Recent observational studies on large cohorts have linked a healthier dietary pattern rich in fruits and vegetables (F&V), fish, wholegrains and plant-sources of protein with higher survival rates in CKD. There is currently no structured education programme in the UK aimed at managing both diabetes and renal diets. A modified X-PERT programme was developed to educate patients with diabetes and ESRD on diabetes management.

**Objectives:** The study involves secondary assessment of dietary data to assess changes in energy-adjusted food intake within stage 4 CKD and haemodialysis (HD) groups separately at baseline (F0), after (F1) and 3 months after intervention (F2).

**Methods:** Patients with stage 4 CKD or on HD, and had type 2 diabetes were included in the study. Patients were either on insulin or tablets. The programme ran for 5 weeks, with 1 to 2 hours of face to face group sessions weekly. 3 x 7-day food diaries were collected from patients (one from each time point F0, F1 and F2) and disaggregation analysis categorised foods into food groups (e.g. fruits, vegetables, red meat, poultry and fish, processed meats, plant sources of protein). Statistical analysis was used to examine whether there was a change in dietary intake across three time points, between F0 and F1, and between F0 and F2 in each group. Wilcoxon Signed-Rank Test statistical testing was performed.

**Results:** 32 participants (15 CKD stage 4 and 17 on HD) with diabetes were recruited onto the education programme. The mean age was similar in both groups (67-68 years), with 53-57% males attending the sessions. The main difference was observed in intakes of processed food. There were significantly higher energy-adjusted median intakes of processed meats at baseline (F0) in the CKD group compared to HD group ( $2.80 \pm 6.3$  vs  $0.10 \pm 2.0$ g/1000kcal,  $p=0.044$ ). Between F0 and F2, there was a statistically significant decrease in median energy-adjusted intake for processed meats in the CKD group ( $4.55$  to  $1.97$ g/1000kcal,  $p=0.018$ ) but a significant increase in HD group ( $0.10$  to  $0.62$ g/1000kcal,  $p=0.04$ ). It is debatable whether these changes are clinically meaningful. For all of the remaining food groups, there was no significant difference in food intakes across the three time points within each of CKD and HD groups.

**Conclusion:** There was no significant change in overall dietary patterns in both groups across the three time points. This could be due to the small sample size. Further research should focus on dietary counselling on a larger scale to see the effects over the short and longer term to enable developing diet plans in this population in future intervention studies.