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P080 -The impact of prevalent stroke at critical junctures in the pathway of care for patients with kidney disease

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Introduction

Chronic kidney disease (CKD) is an independent risk factor for stroke in studies of the general population [1,2]. The impact of a prior stroke on clinically important outcomes in patients with CKD is less well characterised. We examined associations between prior stroke and clinical outcomes in a large UK non-dialysis CKD cohort. We further examined the impact of a prior stroke on death in those patients commencing dialysis.

Methods

The Salford Kidney Study (SKS) is a large UK longitudinal epidemiological cohort study of more than 3000 patients with all-cause non-dialysis CKD recruited since October 2002. Univariate associations between patients with and without prevalent stroke at recruitment were examined by Chi-squared and Mann U Whitney tests. Multivariable cox regression survival analysis adjusted for competing risks [3] was performed in the entire cohort to examine the effects of stroke on endpoints of death, end stage renal disease (ESRD) and non-fatal cardiovascular events. To examine the impact of prior stroke on survival in dialysis patients, multivariable cox regression survival analysis was performed in those patients who reached ESRD and commenced dialysis (haemodialysis or peritoneal dialysis) as their first method of renal replacement therapy.

Results

Of 3060 study recruits 227 had suffered a stroke prior to recruitment (9.1%). Table 1 demonstrates that patients with a stroke at time of recruitment had a similar rate of eGFR decline but increased proportion of non-fatal cardiovascular events and death. Notably patients with prior stroke were less likely to commence dialysis despite being more likely to reach ESRD.

In multivariable cox regression analysis, stroke prior to recruitment into the study was independently associated with mortality (HR 1.20 95%CI 1.0-1.43, p=0.05), reaching end stage renal disease (HR 1.34 95%CI 1.06-1.69, p=0.02) and future non-fatal cardiovascular events (HR 1.54 95%CI 1.12-2.11, p=0.01) after adjustment for age, gender, eGFR, diabetes, hypertension, myocardial infarction, heart failure, atrial fibrillation, smoking history and peripheral vascular disease.

579 patients, median age 65 years, reached ESRD and commenced outpatient dialysis as their first renal replacement therapy. Stroke prior to dialysis commencement (N=48) was significantly associated with mortality (HR 1.47 (95%CI 1.01-2.14 P=0.05) after adjustment for the same factors as described above (except eGFR). Median follow up from dialysis commencement to death or end of study was 25 months.

Conclusions

In a large UK non-dialysis CKD cohort study, patients who suffered a stroke prior to recruitment had an increased likelihood of death, ESRD or non-fatal CVE during follow up even after carefully adjusting for known risk factors and competing risks. Similarly, patients with prior stroke had a 47% increased risk of

mortality during 2 years follow-up after commencing dialysis. This large observational study indicates that stroke alters cardiovascular risk in CKD patients and emphasises the importance of brain-kidney crosstalk.