

P066

## P066 -Chronic kidney disease in patients who have received renal support on ICU

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### Introduction

The incidence of acute kidney injury (AKI) is between 20-50% in a critically ill population. AKI is associated with increased risk of chronic kidney disease (CKD), end stage kidney disease (ESKD) and death. 30% of patients on ICU with AKI will have pre-existing CKD<sup>1</sup>. Arrangements for renal follow up of patients who develop AKI whilst on ICU vary between centres.

### Aim

We aimed to review the renal function pre admission and at one and two years after discharge for all patients who received renal replacement therapy (RRT) with haemofiltration or haemodialysis on ICU during 2016. We reviewed how many were under renal follow up.

### Methods

We reviewed electronic records of all patients who received RRT on the ICU during 2016. We assessed demographic details, renal function, details of ICU stay and co morbidities. We excluded patients who died on ICU or received RRT for non-renal indications. Patients who were not under renal follow up were offered a single renal clinic at 2 years after their ICU discharge.

### Results

64 patients received RRT in ICU in 2016 of whom 20 died during their ICU stay and 4 received RRT for non-renal indications. 40 patients were included in further analysis. The median (IQR, range) age was 60 (49.5-69.5, 20-87) years. 21/40(53%) were admitted to ICU for sepsis and 8/40(20%) had CKD (defined by eGFR<60), and 6/40(15%) had ESKD, (5 on haemodialysis, 1 transplanted) prior to admission. 33% had diabetes and 64% had vascular disease. 7 were known to the renal team prior to admission and 14/40(35%) underwent renal follow up post discharge.

Excluding those on RRT prior to admission, median (IQR, range) pre-admission eGFR was 82 (55->90, 30->90). 3 patients were discharged on RRT. The majority of patients who were discharged from hospital off RRT met eGFR criteria for CKD stage 3, data available for 30, median eGFR 56 (range:10->90, IQR:26-83), N=16/30(54%), p=0.01 compared to pre ICU stay had CKD stage 3 by eGFR criteria.

By one year 2 of 3 patients were still on RRT. The majority of patients from hospital off RRT still met eGFR criteria for CKD stage 3, data available for 29, median eGFR 57 (range:14->90, IQR:39-77), N=15/29(52%) had CKD stage 3 by eGFR criteria.

By 2 years, data available for 19, median eGFR was 51 (range: 12->90, IQR: 32-86) with 11/19 (57%) meeting CKD stage 3 eGFR.

Discharge eGFR was moderately correlated with 2 year follow up eGFR (r=0.49, p=0.03) and post discharge CKD stage 3 did not predict future CKD stage 3 (p=0.35). Whereas eGFR at 1 year post discharge was much more strongly correlated with final follow up eGFR (spearman's r=0.95, p<0.0001) and CKD stage 3 at 1 year predicted CKD at 2 years (p=0.003).

Of those with CKD stage 3 at 2 years 5/11 (45%) were followed up in a renal clinic.

#### Conclusions

eGFR at 1 year post discharge from ICU is the best predictor of long term CKD and this could be used to target patients who need continued renal follow up.