Outcomes at 90 Days Following Acute Kidney Injury Requiring Haemodialysis (AKI-D)

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Background/Aims:

Acute Kidney Injury requiring haemodialysis (AKI–D) is associated with high mortality and poor patient outcomes. At present limited data is available to compare AKI-D patient outcomes across UK renal units. Identifying variation in patient outcomes and the possible reasons behind these is an essential first step in driving quality improvement in this area.

Methods:

Data on all patients with AKI receiving at least one session of intermittent haemodialysis (AKI-D) was collected separately at 3 UK renal units and collated to allow comparison of 90 day outcomes.

Patients at Centre 1 were identified over a 24 month period between 1st January 2014 - 31st December 2016. Centre 2 collected patient data over a 24 month period between 1st June 2017 - 31st May 2019 and Centre 3 over a 12 month period 1st April 2018 - 31st March 2019.

Patients were excluded if they had a kidney transplant, if they received continuous renal replacement therapy (CRRT) in an intensive care setting prior to having intermittent HD or if they were identified as having progressive chronic kidney disease (CKD).

Data collection was performed through data extraction from local IT systems and patient case note reviews. Baseline demographic data including patient age and gender was available for all 3 units. Data was also available on patient outcomes 90 days after their first HD session. Patient outcomes were classified into three groups: patients who had regained independence from renal replacement therapy (off RRT), patients who remained on renal replacement therapy (on RRT) and patients who had died.

Further work is still ongoing to collate additional data on co-morbidities, cause of AKI and more detailed patient outcomes.

Results:

The collated 3 centre data is presented in Table 1 and Figure1. Mean age of patients was similar across all three centres (65-67 years) and all centres had a slight male predominance (55-64%)

Patient outcomes varied considerably across the three centres (p=0.002). Centre 1 had the largest proportion of patients 'off RRT' but Centre 3 had the lowest mortality rates.

Conclusions:

This collated analysis from 3 UK renal units has demonstrated that outcomes following AKI-D are poor. Additionally there is considerable inter-centre variation in patient rates of regaining independence from dialysis and mortality at 90 days. Further analysis is being performed to identify whether the variation can be explained by differences in patient co-morbidities and case-mix. This early work supports the need for the reliable collection of data on patients requiring HD for AKI across the UK.