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P264 -Does a specific dialysis protocol in acute stroke patients affect morbidity and mortality: A four-year retrospective analysis.

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Haemodialysis patients have a ten-fold increased incidence of stroke compared to the general population (Power A, 2013). Haemodialysis is associated with increased risk of in-hospital disability progression regardless of stroke type (Usui T et al, 2018). Dialysis patients who have had an ischaemic stroke showed a three-fold increased risk of haemorrhagic transformation (Lee et al, 2013). A challenging aspect of post stroke care in patients receiving renal replacement therapy is the prescription of haemodialysis regimens. It is suggested that it is important to tailor dialysis regimens in order to minimise abrupt changes in serum osmolality to help minimise changes in cerebral perfusion pressures, thus helping to reduce risk of secondary ischaemia (Davenport, 2013). Stroke specific dialysis protocols have been developed focussing on the use of minimally bioincompatible small surface area dialysers and shorter daily dialysis sessions to reduce fluid shifts (Davenport, 2013). However, evidence to support altered dialysis regimens for post stroke patients is limited. Evidence shows that early intensive therapy improves outcomes post stroke (NICE, 2013), but scheduling in-patient dialysis sessions can hamper access to intensive therapy.

We report a four-year retrospective analysis assessing whether specific dialysis protocol impacts on morbidity and mortality in acute stroke. Data is gathered by analysis of coding databases on stroke and documented dialysis sessions; both haemodialysis and peritoneal dialysis (as a comparator) are included from March 2014 to March 2018 (figure 1). A stroke specific dialysis protocol was implemented in 2016, therefore giving roughly two years of data either side to compare. Results were analysed using a relative risk analyses on outcomes comparing the stroke specific dialysis protocol versus 'normal' dialysis protocol.

Primary measured endpoints were:

- 1) Any statistical difference in re-bleeding rates in haemorrhagic stroke
- 2) Any statistical difference in haemorrhagic transformation in ischaemic strokes based on CT/MRI findings
- 3) Any statistical difference in mortality rates in stroke related deaths

Results:

1. A stroke specific dialysis protocol did not have a statistically significant effect on re-bleeding rates in haemorrhagic stroke – there was one re-bleed in the stroke protocol group versus no re-bleeds in the normal protocol group. However, numbers were small (n=5)
2. Stroke specific dialysis protocol did not have a statistically significant effect on haemorrhagic transformation in ischaemic stroke (p0.16)
3. Stroke specific dialysis protocol did not have a statistically significant effect on mortality, however sample size was small (n=2)

Discussion:

This study offers the first evidence assessing the efficacy of stroke specific dialysis protocol. Although the numbers are small, the results have shown that there is no statistical difference in outcomes when comparing those who were on the stroke protocol versus those on a normal dialysis protocol. A daily stroke specific dialysis protocol may interfere with evidence based intensive therapy which can have a negative impact on outcomes. We note that numbers in this study were low, and postulate that this may be due to

poor coding. More data is needed to make firm conclusions. We suggest further studies examining the dialysis cohort for non-coded strokes.