

Outcomes of Critically Ill patients with Acute Kidney Injury-requiring continuous Renal replacement therapy

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Background: Continuous renal replacement with – related AKI is increasing in ICU settings due to an increase in the incidence of AKI. Liano and Pascual (1996) reported that the three frequencies of AKI requiring CRRT ranged from 1% to 25% due to the relative common complication of AKI in severely ill patients. The incidence of AKI requiring CRRT around the world is unknown. This is respectively due to unavailability of data on one hand and the regional disparities which lead to under-reporting on the other hand. This may cause major areas of challenges in the analysis of data with regard to the outcomes- based critically ill patients with AKI requiring CRRT (Lameire & Vanholder 2006).

Study objective: To conduct a critical analysis of the outcomes of critically ill adult patients with AKI requiring CRRT at Universitas Academic Hospital in Bloemfontein (UAH), to tract retrospectively (i) the incidence of AKI requiring CRRT, (ii) mortality in AKI- dependent CRRT, (iii) renal function recovery, and (iv) CRRT duration.

Methods: This study undertook a retrospective analysis of the outcomes of critically ill adult

patients treated for AKI requiring CRRT at UAH during the period 1st July 2010 to 31st of July 2014.

Results: The study enrolled 87 critically ill patients with AKI- requiring CRRT. Among these patients, 39 (45.8%) were male and 48 (55.2) were female and the mean age was 53.48 years with a standard deviation of 16.53. The incidence of AKI requiring CRRT was 1.12% of all the admissions to the hospital. A further percentage of 1.76% of UAH admissions stemmed from kidney failure requiring CRRT and 63.04 % of AKI requiring CRRT patients. The renal function recovery rate for AKI requiring CRRT was 39.08%, the mortality in AKI requiring CRRT was 24.13 % and the mean duration of CRRT was 3.5 days with a standard deviation of 2.98.

Conclusion: Hospital incidence AKI requiring CRRT is high. Patients with AKI seem to have poor hemodynamic conditions and a severe acidosis status. If their condition contains hyperkalaemia or not at the onset, the previous mentioned factors indicate a severe condition at the start of CRRT.