

A Prospective Multi-Centre Evaluation of Timing of Renal Replacement Therapy for Acute Kidney Injury in Critically Ill Patients in Canada

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BACKGROUND: The optimal timing of initiation of renal replacement therapy (RRT) for acute kidney injury (AKI) is unknown. Defining current practice is necessary to properly design interventional trials. We sought to describe the current state of practice in Canada regarding the timing of initiation of RRT for AKI.

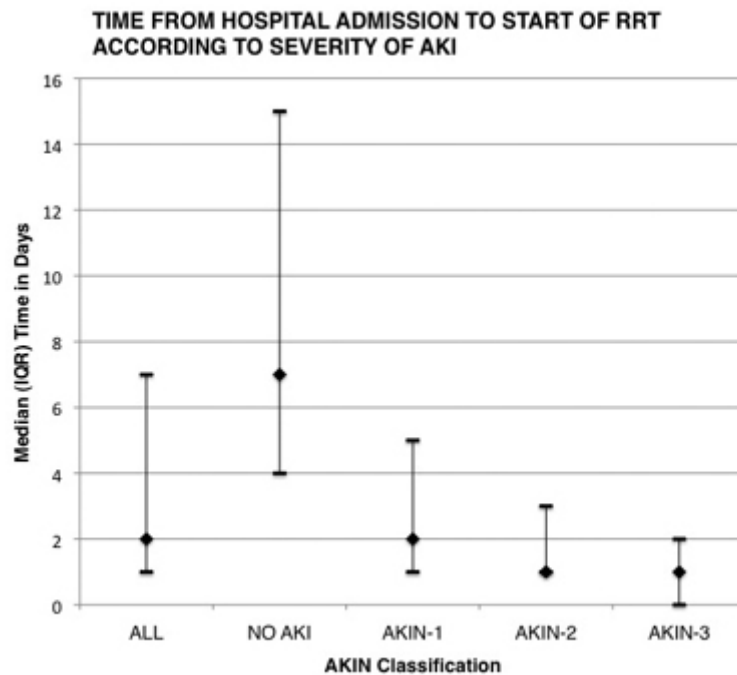
METHODS: A prospective, observational study was undertaken at 10 intensive care units across Canada, enrolling 119 consecutive patients starting RRT for AKI. Data was collected regarding demographics, clinical and laboratory findings, as well as indications for, and timing of, RRT initiation.

RESULTS: The mean (SD) age of patients starting RRT was 59 (15) and 34% were female.

Clinical and Laboratory Findings at Time of RRT Initiation

APACHE II Score mean (SD)	27 (7)
Intubated / Receiving NIPPV, % (n)	83 (99)
Receiving Vasoactive Medication, % (n)	76 (90)
Loop Diuretic (Past 24h), % (n)	28 (33)
Serum Creatinine (umol/L), median (IQR)	322 (221-432)
Serum Urea (mmol/L), median (IQR)	20 (13-27)
Arterial pH, mean (SD)	7.25 (0.15)
Serum Potassium (mmol/L), mean (SD)	4.6 (1.0)

Median (IQR) time from hospital and ICU admission to the start of RRT was 2 days (1-7) and 1 day (0-2), respectively.



CONCLUSIONS: The ICU patients started on RRT in our study generally had advanced AKI, high illness severity, and received RRT early after hospital presentation. Our results describe the current state of practice with respect to the timing of initiation of RRT for AKI in Canada and should aid in the design of future interventional trials.