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A Prospective Cohort Study of Community Acquired Acute Kidney Injury

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Objectives : Community Acquired Acute Kidney Injury (CA-AKI) is dominant form of AKI in developing countries but its outcomes at follow up are largely unknown in such settings. We report data on course and outcomes from a large, prospective cohort of CA-AKI.

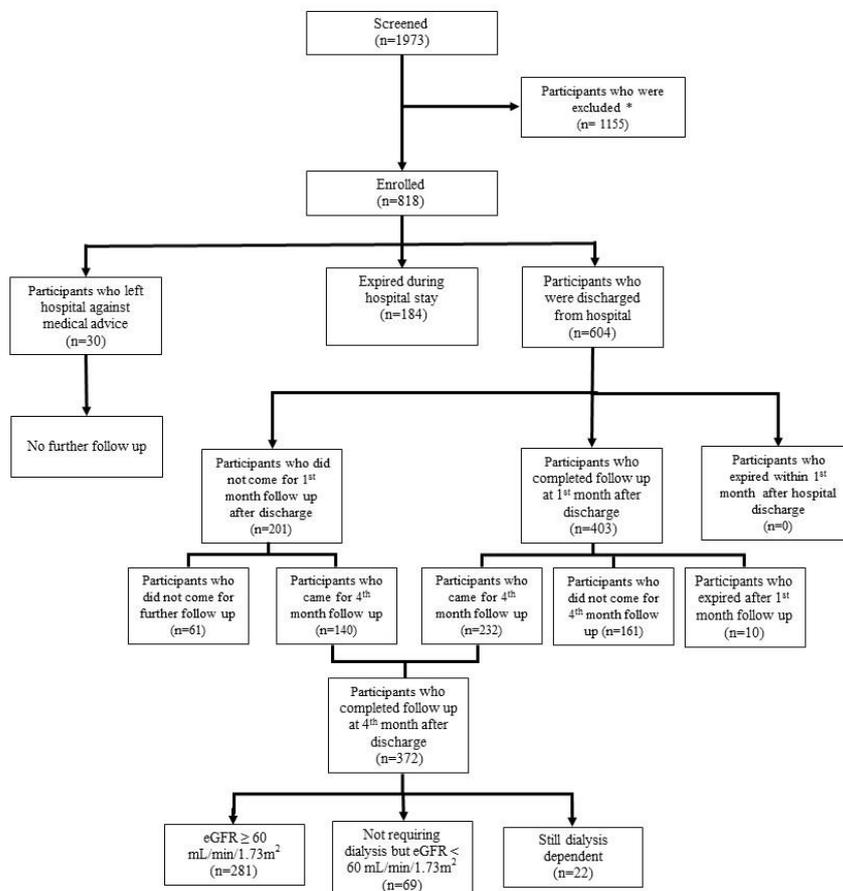
Methods : The study was a single centre, prospective, observational cohort study. Age ≥ 18 years and presence of CA-AKI were inclusion criteria. Underlying CKD, glomerulonephritis, obstructive uropathy, decompensated chronic liver disease, heart failure, autoimmune diseases, malignancy or solid organ transplant recipients were exclusion criteria. Clinical course and renal outcomes were recorded at 1 and 4 months after hospital discharge.

Results : Out of 1973 patients who were screened, 818 were enrolled (figure 1). The average age of study population was 37.81 ± 14.75 years, 58% being males. Hypertension and diabetes mellitus were present in 12% and 8%, respectively. 69% required dialysis. Infections and obstetric causes were most common causes of CA-AKI (figure 2). 184 (22.5%) expired during hospitalization. Acute cortical necrosis was observed in 43 patients. Amongst those with available follow up data, estimated glomerular filtration rate (eGFR) ≥ 60 ml/min/1.73m², eGFR < 60 ml/min/1.73m² but no requirement of dialysis and dialysis dependency were observed in 63.5%, 21.9%, and 14.6%, respectively at 1 month after hospital discharge. At 4 months, the corresponding values were 75.5%, 18.5%, and 6%, respectively. 91 (11%) did not come for any of follow up visits and 10 patients expired after 1 month of hospital discharge. 52 patients underwent clinically indicated kidney biopsies. Acute interstitial nephritis, acute tubular necrosis or their combinations were most common histologic diagnoses.

Conclusions : CA-AKI is associated with high mortality and progression to CKD. There is need of interventions to increase follow up rates in survivors after CA-AKI.

CONSORT FLOWCHART 12.01.2024.jpg

Figure 1: Consort flow diagram



*Did not fulfil inclusion criteria: 34

Age < 18 years: 8, No CA-AKI: 26

Fulfilled any of the exclusion criteria: 1121

Underlying CKD: 531, Diagnosis of glomerulonephritis : 171, Obstructive uropathy: 106, Decompensated chronic liver disease: 163, Heart failure with functional class 3 or 4: 63, Malignancy: 67, Autoimmune diseases: 13, Solid organ transplant: 7

Figure 2: Etiological diagnoses of CA-AKI among study population

