

The Incidence of Acute Kidney Injury, its Predictors and 30-Day Outcomes among Stroke Patients Admitted at Mbarara Regional Referral Hospital

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Abstract

Background: Acute kidney disease contributes a significant proportion to the global burden of admitted patients. Among patients with stroke, AKI is linked with increased short and long-term morbidity, mortality, more time spent in the hospital, and higher hospital expenses. Despite the high economic and mortality burden of AKI, studies on the incidence and predictors of AKI among patients with stroke in MRRH are scarce considering their importance to identify some modifiable risk factors and improve patient prognosis.

Objective: This study was done in MRRH to fill the identified gaps.

Methods: This prospective analysis was done on 126 patients whose data obtained between October 2023 and March 2024 at MRRH. The relevant socio- demographics information, clinical and biochemical data was collected. The incidence of AKI among patients with stroke was calculated as a proportion and the predictors of AKI were determined using logistic regression and level of significance was established at $p\text{-value} \leq 0.05$.

Results: The study found a high incidence of AKI among patients with stroke which was 35.71%. A considerable number of patients who had stroke were females 79 (62.7%). The mean age of the patients was 65.43 (± 17.24) years, the mean time to hospital was 5.08 (± 2.91) days with mean NHSS score 17.52 (± 7.63). The predictors of AKI were, infections (OR=7.415, $p=0.003$, CI=2.014-27.294), Fever (OR=1.928, $p=0.038$, CI=1.037-3.582), and dysphagia (OR=3.941, $p=0.024$, CI=1.198-12.957). The patients who had AKI had a significantly higher mortality compared to those without (40% vs. 24.7%), (Chi-square (3.90)=0.048).

Conclusions: We found that AKI is a very common complication in hospitalized patients with stroke and is linked to higher mortality. The important predictors for AKI following stroke were infections, dysphagia and fever. We recommend that patients with stroke should be carefully assessed for risks for AKI (dehydration and infections) and promptly treated in addition to AKI screening.

Key words: Acute Kidney Injury (CKI) predictors, Stroke patients