KSN 2021
FULLY VIRTUAL MEETING
September 02 (Thu) - 05 (Sun)

Oral Communication Abstract
Presentation No. OC5-07 (Abstract Submission No. 2538)

Oral Communications 5 Sep. 3 (Fri), 08:30-10:30

Comparison of outcomes of mild and severe community- and hospital-acquired acute kidney injury

Kristianne Rachel Medina - Liabres[1], Jong Cheol Jeong[3], Ji Won Ryu[3], Eunjeong Kang[2], Ho Jun Chin[3], Ki Young Na[3], Dong-Wan Chae[3], Sejoong Kim[3]
[1]Department of Internal Medicine - Nephrology, Seoul National University Bundang Hospital, Philippines
[2]Department of Internal Medicine-Nephrology, Ewha Womans University School of Medicine, Korea, Republic of
[3]Department of Internal Medicine-Nephrology, Seoul National University Bundang Hospital, Korea, Republic of

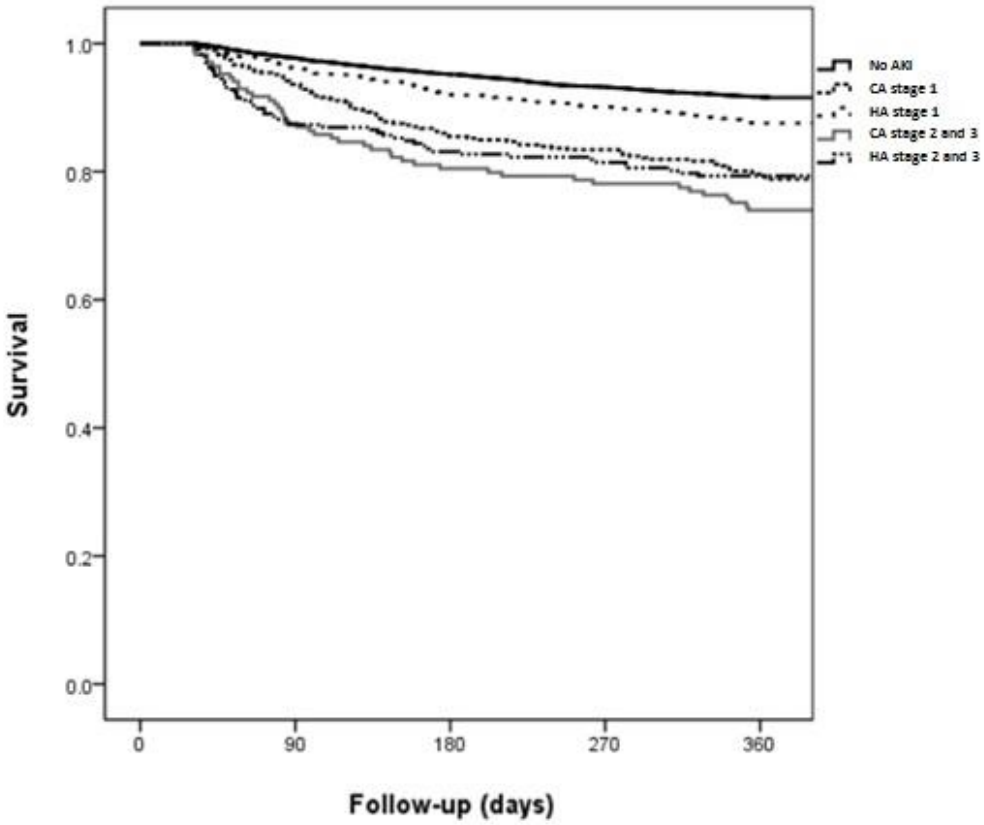
Objectives: Acute kidney injury, an increasingly common occurrence among hospitalized patients worldwide, carries a significant risk for adverse outcomes. This study aimed to compare incidence, short- and long-term outcomes of all stages of community-acquired (CA-AKI) and hospital-acquired AKI (HA-AKI), and identified predictors for such outcomes.

Methods: This observational retrospective study identified patients admitted at Seoul National University Bundang Hospital between January 2013 and December 2013 who developed CA-AKI or HA-AKI. Demographic data and clinically relevant variables were retrieved from electronic medical records. Short- and long-term patient survival and renal survival were analyzed.

Results: AKI incidence was 14.3% (CA-AKI 4.8% and HA-AKI 9.5%). Highest 30-day and 1-year mortality was recorded in the CA-AKI group (p <0.001). Compared to CA-AKI stage 1 patients, HA-AKI stage 1 patients were less likely to die within 30 days (p 0.005) and 1 year of AKI diagnosis (p 0.038). This higher mortality risk in CA-AKI patients was also observed among more severe AKI stages after adjustments for age, sex, comorbidities, baseline and discharge creatinine, and nephrology referral. AKI severity was an independent predictor of short- and long-term mortality. When compared to stage 1 CA-AKI, an increasing 30-day mortality risk were observed for more severe CA-AKI (stage 2 HR 2.69, p 0.001 and stage 3 HR 4.35, p <0.001). There was no difference in short-term renal survival between both groups. However, more CA-AKI patients developed end stage renal disease (ESRD) within 1 year (p <0.001). Of the markers of renal function analyzed, discharge creatinine was the most consistent predictor of 30-day and 1-year mortality (p <0.001), and renal survival among CA-AKI and HA-AKI patients.

Conclusions: In conclusion, patients with CA-AKI had worse short- and long-term outcomes compared to HA-AKI patients. AKI severity and discharge serum creatinine were significant independent predictors of 30-day and 1-year mortality.

Figure 1. Kaplan Meier survival curve comparing 1-year survival rates of patients with no acute kidney injury (AKI), Stage 1, 2, and 3 community-acquired (CA)-AKI and hospital-acquired (HA)-AKI. (Log-rank test p <0.001, Breslow p<0.001)



Patients-at-risk

CA-AKI stage 1	421	367	335	327	312
HA-AKI stage 1	967	904	866	848	824
CA-AKI stage 2 & 3	212	148	136	132	125
HA-AKI stage 2 & 3	282	207	197	193	188