

MO358

ACUTE KIDNEY INJURY AND MORTALITY RISK IN OLDER ADULTS WITH AND WITHOUT COVID-19: DATA FROM GEROCVID STUDY

Hong Xu¹, Sara Garcia-Ptacek², Martin Annetorp³, Annette Bruchfeld³, Tommy Cederholm⁴, Peter Johnson⁵, Miia Kivipelto³, Carina Metzner³, Dorota Religa³, Maria Eriksdotter²

¹Karolinska Institutet, Division of Clinical Geriatrics, Huddinge, Sweden, ²Karolinska Institutet, ³Karolinska University Hospital, ⁴Uppsala University and ⁵Capio Geriatrik Nacka AB

BACKGROUND AND AIMS: Research regarding COVID-19 and acute kidney injury (AKI) in older adults is scarce. We evaluated the risk factors and outcomes of AKI in hospitalized older adults with and without COVID-19.

METHOD: Observational study of patients admitted to two geriatric clinics in the Stockholm Region of Sweden during the first wave of the COVID-19 pandemic from March 1st to June 15th 2020. The difference in incidence, risk factors and adverse outcomes for AKI between patients with or without COVID-19 were examined. Odds ratios (ORs) for AKI were obtained from logistic regressions. The hazard ratios (HRs) for the risk of in-hospital death were calculated from Cox proportional hazard regression models.

RESULTS: We analyzed 316 older patients hospitalized for COVID-19 and 876 patients for non-COVID-19 diagnoses. The mean age was 83 ± 9 years, 57% were women, and mean baseline kidney function as depicted by estimated glomerular filtration rate (eGFR) was 62 ± 23 ml/min/1.73m². AKI occurred in 92 (29%) of patients with COVID-19 vs. 159 (18%) without COVID-19. The severity of AKI was significantly worse in patients with COVID-19 compared with non-COVID patients. The odds for developing AKI were higher in patients with COVID-19 (adjusted OR, 1.70; 95% CI, 1.04-2.76), low baseline kidney function [4.19 (2.48-7.05), for eGFR 30 ~ <60 ml/min/1.73m², and 20.3 (9.95-41.3) for eGFR <30ml/min/1.73m²], and higher C-reactive protein (CRP) level (OR 1.81 (1.11-2.95)). The risk of in-hospital death was highest in patients with COVID-19 and AKI [adjusted HR 23.5, 95% CI (8.75-63.0)], followed by COVID-19 without AKI [9.10 (3.52-23.6)] and by patients without COVID-19 and with AKI [6.38 (2.28-17.9)] after adjusting for patient demographics, vital signs, baseline kidney function and medications and using non-COVID patients with no AKI as reference.

CONCLUSION: Geriatric patients hospitalized with COVID-19 had a higher incidence of AKI compared with patients hospitalized with other diagnoses. AKI and COVID-19 were associated with in-hospital death. Optimal management of AKI may improve the outcome of COVID-19 in geriatric patients.