

Is second admission more severe than first admission? A comparative study among chronic kidney disease (CKD) with COVID-19 patients

Abdullah Muhammad Nabil¹, Che Arbaei Nabilah², Kamarudin Muhammad Imran², Yusoff Mohd Yusran¹, Abdul Rani Siti Norizan¹, Wan Hassan Wan Hasnul Halimi¹

¹Hospital Raja Perempuan Zainab II, Kelantan, ²Hospital Universiti Sains Malaysia

ABSTRACT

Introduction: CKD patients have a higher risk of having a poor prognosis for COVID-19 compared to non-CKD patients. Previous studies showed that readmission tends to be more severe. This study aimed to compare parameters in the first and second admissions among CKD patients with COVID-19. **Methods:** This is a retrospective cohort study involving CKD patients with COVID-19 infection who were admitted to two main tertiary hospitals in Kelantan from December 2020 to August 2021. Patients with age over 18 years old, with eGFR of 60mL/min/1.72m² and below, and with a confirmed COVID-19 infection were included. Readmission status within 12 weeks after the first hospitalization was confirmed for every patient. **Results:** A total of 140 patients were analyzed and 34 of them were readmitted. The mean age was 50 years. The median difference between the first and second admissions was 13 days. The majority of patients (79.4%) were readmitted for causes other than COVID-19 with the most common being pneumonia 17(50%). The median duration of hospitalization for first and second admission were 11(8) and 7(8) days, respectively (p-value=0.001). There were no significant differences between first and second admission in terms of ventilation requirement (17.6% vs. 23.5%, p-value=0.687) and intensive care unit (ICU) admission (29.4% vs. 35.3%, p-value=0.754). **Conclusion:** Although other studies found that second admission parameters were more severe, we found that most of our patients were readmitted due to causes other than COVID-19. A longer duration of study with a specific selection of readmissions due to COVID-19 is needed to verify findings from previous studies.