



CLINICAL CHARACTERISTICS AND OUTCOMES OF HOSPITALIZED COVID19 PATIENTS DURING DOMINANCE PERIODS OF B.1.617.2 (DELTA) AND B.1.1.529 (OMICRON) VARIANT.

VILJEVAC J.¹, Vuković V.¹, Likić R.^{1,2}, Popović F.³, Budimir B.³, Baričević D.³, Pevec B.³, Vukić Dugac A.^{1,3}, Samaržija M.^{1,3}, Pavliša G.^{1,3}

¹ School of Medicine, University of Zagreb, Zagreb, Croatia
School of Medicine

² University Hospital Centre Zagreb, Zagreb, Croatia
Department of Internal Medicine

³ University Hospital Centre Zagreb, Zagreb, Croatia
Department for Respiratory Diseases Jordanovac

Objective:

In January of 2022. B.1.1.529 (Omicron) variant of SARS-Cov-2 has displaced B.1.617.2. (Delta) as the dominant variant in Croatia. Initial reports have suggested the Omicron variant spreads more easily than earlier variants but causes less severe symptoms.



The aim of our study was to describe the characteristics of patients hospitalized with proven SARS-Co-2 infection during the Delta and Omicron dominance periods.

MATERIALS AND METHODS:

The study includes 100 adult patients hospitalized because of PCR confirmed SARS-Co-2 disease, 50 patients hospitalized in November of 2021 (Delta dominant period) and 50 in February of 2022 (Omicron dominant period). Patient data was obtained retrospectively from electronic database.

RESULTS:

The group of patients treated in November 2021 included 29 males and 21 females, median $\pm$ SD age 73 ± 17.04 , BMI 25.89 ± 5.48 kg/m². 40% (n=20/50) were vaccinated, 74% (n=37/50) had pneumonia. 90% of patients (n=45/50) were on supplemental oxygen therapy, 22% (n=11/50) on *high-flow nasal cannula (HFNC)*, 6% (n=3/50) needed a non-invasive mechanical ventilation. Median $\pm$ SD duration of hospital stay was 14 ± 10.96 days. 36% (n=18/50) of patients died during their hospital stay.



The group of patients treated in February of 2022 included 22 males and 28 females, median $\pm$ SD age 76 ± 14.69 , BMI 27.2 ± 4.51 kg/m². 48% (n=24/50) were vaccinated, 76% (n=38/50) had pneumonia. 70% of patients (n=35/50) were on supplemental oxygen therapy, 8% (n=4/50) were on HFOT, 4% (n=2/50) needed a non-invasive mechanical ventilation. Median $\pm$ SD duration of hospital stay was 11 ± 10.06 days. 14% (n=7/50) of patients died during their hospital stay.

Cox regression analysis found that age (HR=1.11; 95%CI 1.06 - 1.17; p=0.001) and oxygen therapy (HR= 1.03; 95%CI 1.01 - 1.05; p=0.01) were the most important predictors of mortality. The length of hospital stay was significantly shorter for February 2022 group (p<0.005). Kaplan-Meier curve showed that the average length of hospital stay was shorter, and outcome was better for February 20220 patient cohort when compared to November 2021 cohort (HR= 0.24; 95%CI 0.09 - 0.65; p=0.01).

CONCLUSION:

Patient groups treated during SARS- Co-2 virus Delta and Omicron variant dominance were significantly different. Patient outcomes were significantly better during Omicron variant dominance, which is reflected in shorter hospital stay and higher survival rates of those patients.



1. Karim SSA, Karim QA. Omicron SARS-CoV-2 variant: a new chapter in the COVID-19 pandemic. Lancet 2021;398:2126-8.