



COMORBIDITY AS A RISK FACTOR FOR THE DEVELOPMENT OF SEVERE COVID-19 DISEASE CAUSED BY DELTA AND OMICRON VARIANT

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Objective:

In January 2022, the B.1.1.529 (Omicron) variant of SARS-CoV-2 suppressed the B.1.617.2 (Delta) variant in Croatia. Epidemiological studies have shown that Omicron variant infection has a significantly lower risk of hospitalizations compared to the Delta variant.

The aim of our study was to describe the characteristics of patients hospitalized during the Delta and



Omicron dominance periods and to analyse the difference in comorbidities. Data obtained from the hospital electronic database were retrospectively analyzed.

The study included 100 patients with PCR-proven SARS-CoV-2 infection. We included 50 patients hospitalized in the COVID-19 ward in November 2021 (Delta predominant period) and 50 patients from February 2022 (Omicron).

Results:

The group of patients treated in November 2021 consisted of 29 men and 21 women, the median $\pm$ SD age was 73 ± 17.04 years. 40% were vaccinated ($n = 20/50$). 68% had arterial hypertension ($n = 34/50$), 28% had diabetes ($n = 14/50$), 16% dyslipidemia ($n = 8/50$), 56% had chronic heart disease ($n = 28/50$), 36% had chronic renal failure ($n = 18/50$), 48% a liver lesion ($n = 24/50$), 12% had a stroke ($n = 6/50$). The median $\pm$ SD of the total number of comorbidities was 5 ± 2.8 .

Patients treated in February 2022 were 22 men and 28 women, the median $\pm$ SD age was 76 ± 14.69 years. 48% were vaccinated ($n = 24/50$). 60% had arterial hypertension ($n = 30/50$), 54% had diabetes ($n = 12/50$), 20% dyslipidemia ($n = 10/50$), 50% had chronic heart disease ($n = 28/50$), 20% had chronic renal failure ($n = 10/50$), 34% a liver lesion ($n = 17/50$), 18% had a stroke ($n = 9/50$). The median $\pm$ SD of the total number of comorbidities was 5 ± 2.76 .



The number of cardiac comorbidities was statistically significantly higher in the group of patients treated during the dominance of the Delta strain of SARS-Co-2 virus ($p = 0.046$).

Conclusion:

The group of COVID-19 patients treated during the dominance of Delta and Omicron variants of SARS-Co-2 virus differed significantly in the number of cardiac comorbidities. No statistically significant difference was found among other comorbidities.

References:

1. Reduced risk of hospitalisation associated with infection with SARS-CoV-2 Omicron relative to Delta: a Danish cohort study. SSRN. 2022.
2. Risk of severe COVID-19 from the Delta and Omicron variants in relation to vaccination status, sex, age and comorbidities – surveillance results from southern Sweden, July 2021 to January 2022.



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