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**COVID - 19 AND AKUTE KIDNEY INJURY- A SINGLE CENTER EXPERIENCE**

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**BACKGROUND AND AIMS:** The new coronavirus disease (COVID 19) has become a worldwide health emergency with a wide spectrum of clinical presentation, from common cold symptoms to multiorgan failure. A great number of medical centers have reported that patients with COVID-19 have developed acute kidney injury. The kidney is a target organ for SARS - COV2 because of ACE2 receptor, the binding site for this virus, is expressed in kidney tissue. The potential mechanisms for kidney injury are direct kidney injury, inflammation, activation of coagulation and complement cascades. Data from centers worldwide reported a wide range of AKI incidence, from 0,5% in China to 46% in USA. The aim of this study was to analyze incidence, risk factors and outcomes of AKI in hospitalized patients with COVID 19 who were treated from 01.04. to 01.06.2020. at Nephrology Department of University Clinical Center Zvezdara, which was at the time transformed into COVID hospital.

**METHOD:** This retrospective observational study included 51 patients who had normal kidney function before the infection with SARS COV2, and 7 of them developed dialysis non-dependent AKI. Analysis included data collection from the patients' history including demographic, clinical and administrative data. Statistical analysis has been performed using SPSS software version 20 (IBM Corporation, New York, USA).

**RESULTS:** Out of 51 patients 7 (13.7%) developed AKI, mean age was 59 + 16 years and 53% were male. Diabetes mellitus was present in 27 of patients with AKI, hypertension in 6/7, obesity in 3/7, coronary artery disease in 1/7 and 1 of 7 patients was smoker. These risk factors except obesity (p= 0.05) didn't vary significantly between two groups (AKI and non AKI patients with COVID-19). Our results showed significant correlation between AKI development and obesity (p= 0.05, OR 4.75), Charlston index score (p=0.01), D dimer score (p=0.01), and CT COVID score (p=0.03). Regarding the outcome, COVID 19 patients with AKI showed 7-fold higher risk for fatal outcome (p= 0.046).

**CONCLUSION:** Obesity, higher D dimer values, worse CT findings and higher Charlston comorbidity score index were associated with acute kidney injury in patients with COVID 19. AKI proved to be significant risk factor for fatal outcome in patients with SARS COV2 infection.