

## 16. RENAL AFFECTATION IN SARS-COV-19.

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**Introduction.** SARS-Cov-2 infection can be associated with kidney dysfunction or be the cause of kidney dysfunction through different mechanisms. Numerous observational studies have mostly described the interrelation between SARS-Cov-2 and the manifestations of acute kidney injury, nephritic and nephrotic syndrome, isolated proteinuria and hematuria. The goal of the study was to determine the correlation between SARS-COV-19 infection and renal function affectation.

**Aim of study.** In people who develop clinical illness in response to SARS-CoV-2, the most commonly affected is the respiratory system, but the virus can affect any organ in the body including the kidneys. Acute kidney injury (AKI) is the second most common organ damage in COVID-19 patients reported by different studies. The pathogenesis of AKI is likely multifactorial that involves not only direct viral invasion but also dysregulated immune response in the form of cytokine storm, ischemia to kidneys, hypercoagulable state, and rhabdomyolysis. Also, SARS-Cov-2 infection is associated with new-onset nephrotic syndrome.

**Methods and materials.** The information was collected and analyzed by performing a research in the database of the Department of Internal Medicine Rheumatology and Nephrology of the State University of Medicine and Pharmacy *Nicolae Testemitanu*, within the Republican Clinical Hospital Timofei Moșneaga, on a batch of 118 patients diagnosed with SARS-Cov-2 infection in 2021. We defined AKI based on the Improving Global Outcomes (KDIGO) guidelines that suggest a SCr computed from the Modification of Diet in Renal Disease (MDRD) formula, assuming an estimated glomerular filtration rate (eGFR) of 75 ml/min/1.73 m<sup>2</sup>.

**Results.** The study group was represented by 118 patients aged between 24 years-old and 84 years-old with the average age of 59,07, 64 patients were female (54,24%) and 54 (45,76%) were males SARS-Cov-2 infection. Based on our criteria we found that AKI developed in 48 (40,6%) patients during their stay. Also we determined that 17,8 % of patients had nephritic syndrome with increased proteinuria and presence of hematuria. Older people and those with comorbidities were more predisposed to have evidence of AKI or nephritic syndrome.

**Conclusion.** Using Improving Global Outcomes (KDIGO) guidelines and the Modification of Diet in Renal Disease (MDRD) formula we found that in our study group of patients hospitalised for SARS-Cov-2 infection the most common manifestation of kidney damage is Acute kidney injury (AKI). Nephritis syndrome was also often present, but with a lower incidence than AKI.