uted to an inconsistent exercise schedule, a known factor of SBP management and also a possible by-product of the current pandemic.

EFFECT OF CORONAVIRUS INFECTION ON PATIENTS WITH CONTROLLED AND UNCONTROLLED ARTERIAL HYPERTENSION

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Objective: To assess the severity of coronavirus infection in patients with hypertension, including resistantand refractory hypertension, and to assess the effect of taking ACE inhibitors and ARBs on the course of COVID-19.

Design and method: We called 252 people with an established diagnosis of hypertension, included in the database from November 2018 to July 2021, in order to identify patients who have recently undergone COVID-19. Initially, the patients were divided into groups depending on the number of drugs taken and the achievement of target blood pressure levels.

Results: 21 (8.3%) of 252 people had a coronavirus infection. 10 out of 21 patients (48%) noted blood pressure destabilization. 6 (60%) of these 10 initially belonged to the group of uncontrolled hypertension (4 of 6 had refractory hypertension, 2 of 6 had uncontrolled resistant hypertension), however, all of them noted worsening blood pressure control and increased frequency of hypertensive crises compared with the period before COVID-19. In 4 out of 9 patients with initially controlled hypertension, BP was destabilized with subsequent normalization of BP during the recovery period.

COVID-19 lasted no more than 14 days in all patients and hypertensive crises was treated by taking short-acting drugs, including an ACE inhibitor (Captopril) and an imidazoline receptor agonist (Moxonidine). 7 (33.3%) and 12 (57.1%) of 21 patients continued to take ACE inhibitors and ARBs, respectively, during coronavirus infection. In 2 (9.6%) of 21 patients, the target BP values were achieved during monotherapy with calcium channel antagonists. All patients with Covid-19 had mild or moderate disease; hospitalization was not required in any of the cases.

Conclusions: COVID-19 can destabilize blood pressure in patients with hypertension. Taking an ACE inhibitor / ARB does not worsen the course of coronavirus infection in patients with both controlled and uncontrolled hypertension.

ORTHOSTATIC HYPOTENSION IN COVID 19 - CATCH IT IF YOU CAN!

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Objective: The relationship between COVID-19 and blood pressure (BP) has raised great concern since the discovery of Angiotensin Convertase Enzyme 2 (ACE 2) – mediated mechanism of action for Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-COV2). Hypertension (HTN) itself proved to be a risk factor for more severe Coronavirus Disease 19 (COVID -19). However less studies focus on the trend of blood BP for patients with COVID-19 during the initial phase of disease.

Design and method: We present the case of a 71 years old woman with grade 2 HTN previously controlled with diuretic and betablocker therapy that came to our hospital with dyspnea, cough and debilitating fatigue progressively worsened in the last 10 days. The patient also related the first episode of syncope in her life the night before the presentation.

Results: The clinical evaluation revealed a conscious, euvolemic, with polypnea and a peripheral saturation in oxygen of 86%, corrected to 95% with 9 liters oxygen/minute via simple face mask and a BP of 110/70 mmHg with a ventricular rate of 45 beats per minute in supine position. The assessment of BP values while standing showed a value of 78/60 mmHg after 1 minute and 58/40 mmHg after 3 minutes, while the ventricular rate increased overall to 65 beats per minute. ECG was remarkable only for mild bradycardia and computed tomography pulmonary angiogram excluded pulmonary embolism. The patient was admitted with severe COVID-19 accompanied by severe orthostatic hypotension and bradycardia. Continuous telemonitoring showed only mild bradycardia. Under standard COVID 19 treatment, after 10 days, her symptoms had resolved with no residual orthostatic hypotension or bradycardia.

Conclusions: In conclusion this case reflects the life-threatening dysautonomia caused by SARS-COV 2 infection. More concern should be placed on this type of fragile patients, taking into account both the macroscopic implications of being confined to bed for a long period of time and the microscopic butterfly effect caused by the binding of the virus on the widespread ACE 2 in the lungs, heart, kidneys and digestive tract.

RED BLOOD CELL COLOUR VARIATION AS A MARKER OF CALCIUM DISTRIBUTION: WHAT ROLE DOES IT HAVE IN HEART FAILURE PATIENTS WITH HYPERTENSION AND LONG COVID?

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Objective: Red blood cell (RBC) role is both passive action, oxygen delivery to the tissues as well as carbon dioxide to the lungs and active action involvement in the regulation of vascular tone.

The aim was to investigate pathophysiological and ultrastructural changes of RBC in heart failure (HF) patients with hypertension (HT) and long Covid.

Design and method: In total 12 patients with HF of Coronary Artery Disease origin, HT, and long Covid were examined. Mean age of patients was 62 ± 5.8 years. The control group consisted of 10 apparently healthy people. The functional state and ultrastructure of RBC were studied using electron microscopy.

Results: During ultrastructure examination, structural pathologies of RBC in HF patients with HT and long Covid were revealed. RBC anisocytosis and poikilocytosis as structural damage variations in size and shape were found respectively. Reticulocytes were found much more often in HF patients with HT and long Covid than in the control group. In healthy control group, RBC had a typical discoid shape. In the presence of long Covid, both calcification as a marker of RBC apoptosis and destruction was also detected (Fig.1). Neutrophil extracellular traps (NETs) were found in RBC surrounding (Fig.1).



Conclusions: Altered RBC function has important implications for HF patients with HT and long Covid. RBC has been shown to induce endothelial cell dysfunction and to increase cardiac injury as well as increased inflammatory processes in long Covid. The presence of HF, HT and long Covid leads to RBC calcification and activation of blood cell apoptosis. Prognostic role of RBC calcium distribution in combination with other important prognostic measures, such as biomarkers like Thrombospondin - 1, NT-proBNP and ST2 is subject of interest and requires further research.

NEW ONSET OF HYPERTENSION IN PATIENTS ADMITTED FOR INFECTION WITH SARS-COV-2 VIRUS

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Objective: The aim of the study was to assess the clinical particularities and the lab tests in patients hospitalized for SARS-COV2 infection, with new onset of hypertension on admission.

Design and method: We performed a retrospective study on 217 patients admitted to a Clinical Emergency Hospital between January 2021 and October 2021.

Results: We had 217 patients admitted in internal medicine clinic for infection with SARS-COV2 virus, most of them with moderate and severe form of disease. From them, 148 patients had hypertension, 83.78% with medical history of hypertension and 16.22% with new onset of high blood pressure on admission. Patients were aged between 23 and 99 years, with an average age of 65 years. In comparison, the patients with new onset of hypertension (subgroup 1) were aged between 37 and 90 years, with an average age of 66 years. The most affected group of age was 60–69 years.

In subgroup 1, the gender distribution was: 58.33% male, 41.66% female.