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PO-055 - (23845) - CHANGE IN ERYTROCYTES IN BLOOD IN PATIENTS WITH MODERATE TO SEVERE COURSE OF CORONAVIRUS DISASES

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No conflicts of interest

Coronaviruses can infect bone marrow cells, which leads to abnormal hematopoiesis. There is increasing evidence that erythrocyte deformation is a potential indicator of specific pathological conditions, and can be a biomarker for determining cell state and properties of clinical relevance.

Material: blood samples of patients with moderate to severe course of the coronavirus disease COVID-19, who are receiving the inpatient treatment at Lviv Regional Infectious Diseases Clinical Hospital due to a confirmed diagnosis of COVID-19. **Study methods:** morphological (light microscopy and electron microscopy) and statistical.

As a result of peripheral blood examination, we found the following changes on part of blood corpuscles: change in electron density, shape and size of erythrocytes compared to the normal values; presence of echinocytes, spherocytes, moon-like erythrocytes, bell-like erythrocytes; erythrocytes changed in shape, accumulated mainly due to adhesion and aggregation; damage to the plasmolemma of most erythrocytes changed in shape;completely destroyed erythrocytes due to the processes of eryptosis have the appearance of "burnt coal from the fireplace"; leukocytes, in particular neutrophilic granulocytes, were hyperactive due to vacuolization and hypertrophied Golgi complex, participated in the body's immune response, as well as in the capture and destruction of coronaviruses

1. The severity of COVID-19 patients’ condition depended on the number of destroyed erythrocytes and the degree of their damage.
2. Transport function of peripheral blood erythrocytes was impaired as a result of changes in their shape, electron density and plasmolemma damage.
3. Adhesion and aggregation of erythrocytes, and the formation of sludge syndrome were observed.

Palavras-chave : erytrocytes, covid-19