



## ECHOCARDOGRAPHIC FEATURES OF PATIENTS AFTER COVID-19 PNEUMONIA

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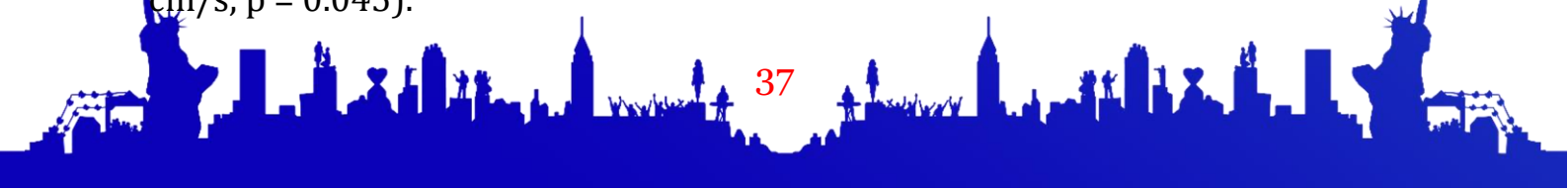
Summary: It is relevant to study the effect of a complicated course of a new coronavirus infection on the patient's cardiovascular system in the long term.

Purpose of the study: to compare clinical and echocardiographic parameters of persons with proven COVID-19 pneumonia one year after discharge, depending on the magnitude of the global longitudinal strain of the left ventricle (LV GLS).

Material and methods. 58 patients who had COVID-19 pneumonia were examined after a year  $\pm$  2 weeks. after discharge, the mean age was  $53.0 \pm 16.7$  years (from 18 to 84 years); 56.8% of them are men. The parameters of global and segmental longitudinal myocardial deformity of the left ventricle were studied in 40 examined patients with optimal visualization quality in echocardiography (EchoCG). Patients were divided into groups depending on the LV GLS value: group 1 - with normal LV GLS ( $< -20\%$ ) - 18 people, group 2 - with depressed LV GLS ( $\geq -20\%$ ) - 22 people. The groups did not differ in age ( $p = 0.145$ ), severity of lung injury during hospitalization ( $p = 0.691$ ), duration of hospitalization ( $p = 0.626$ ) and frequency of stay in intensive care units (ICU) ( $p = 0.420$ ).

Results. Violation of LV GLS one year after discharge was detected in 34 (58.6%) patients with optimal visualization quality, while the LV ejection fraction (EF) in all patients was normal.

Group 2 was dominated by men (15 (68.2 vs. 31.8%;  $p < 0.001$ ), in this group, a combination of coronary heart disease (CHD) and arterial hypertension (AH) was more often diagnosed (22 vs. 6%;  $p = 0.040$ ) There were no significant intergroup differences in LV EF In group 2, not only LV GLS was significantly worse ( $-16.3 \pm 1.4$  vs.  $-22.7 \pm 1.3\%$ ;  $p < 0.001$ ), but also diastolic function parameters lower left atrial emptying volume index ( $1.2 \pm 0.25$  vs.  $13.6 \pm 4.1$  cm/s,  $p = 0.045$ ).

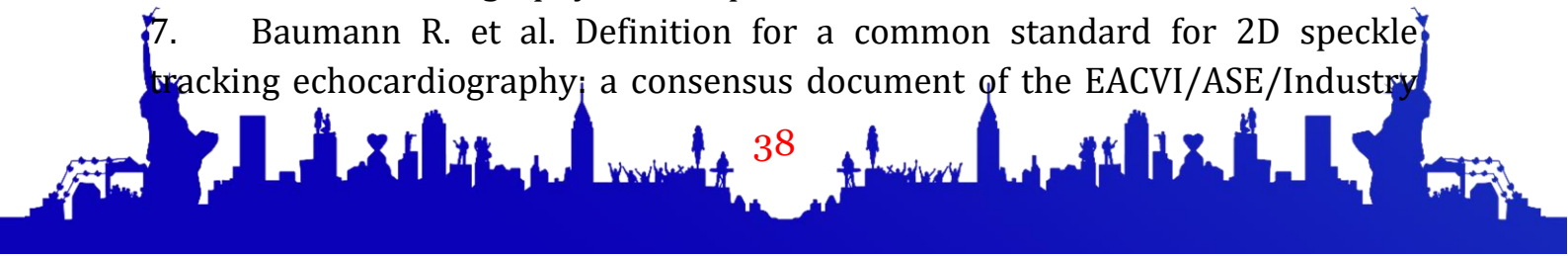




Conclusions. Inhibition of LV GLS one year after COVID-19 pneumonia was detected in 58.6% of patients with normal LV EF. In the group with impaired LV GLS, men predominated, IHD was more often detected in combination with hypertension, and LV diastolic function indicators were worse compared to the group with normal LV GLS.

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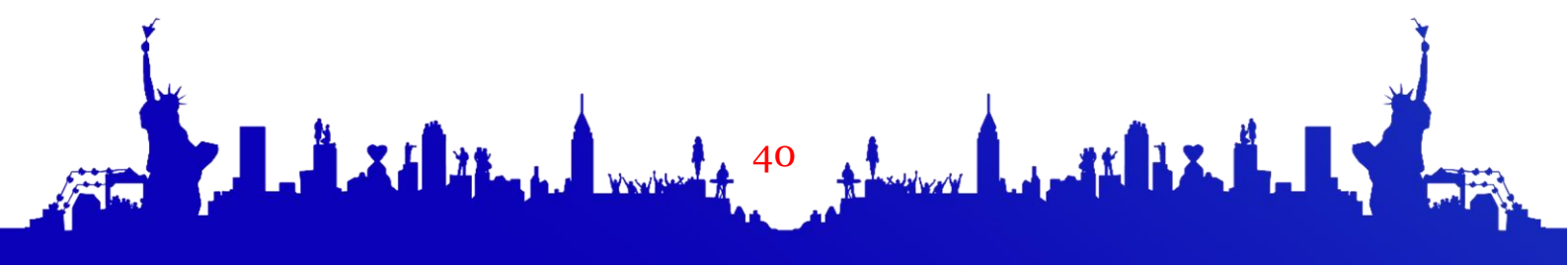


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