

THE RISK FACTORS FOR THROMBOSIS IN PATIENTS RECOVERED AFTER COMMUNITY ACQUIRED PNEUMONIA ASSOCIATED WITH COVID-19

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Abstract

The aim of the study was to identify the risk factors for thrombotic events in individuals who have experienced community acquired pneumonia associated with COVID-19 and did not have thrombotic events during the acute period of COVID-19.

Materials and methods. 45 individuals were examined in post-COVID-19 period (age - 61.0 (54.0; 68.0) years, males - 22 (48,9 %), females - 23 (51,1 %)). All patients were examined twice: at visit 1 — 45,0 (40,0; 60,0) days from the onset of COVID-19, and at visit 2 — 150,0 (117,5; 160,0) days from the onset of COVID-19. Depending on whether the patients received anticoagulant therapy during post-COVID-19 period, the main group was divided into two subgroups: subgroup 1 included 25 (55,6 %) individuals who received anticoagulants during post-COVID-19 period (the course of acute COVID-19 was moderate in 7 (28,0 %) individuals, and severe or critical in 18 (72,0 %) individuals); subgroup 2 included 20 (44,4 %) individuals who did not receive anticoagulants during post-COVID-19 period (the course of acute COVID-19 was moderate in 12 (60,0 %) individuals and severe in 8 (40,0 %) individuals). Clinical methods, pulse oximetry, laboratory and instrumental methods as well as assessment of the probability of thrombosis according to the Wells and Padua scales were used.

Results. There was not any thrombotic event occurred in subgroup 1 during post-COVID-19 period. The duration of anticoagulant use in patients from subgroup 1 was 63,0 (60,0; 90,0) days from the onset of COVID-19 symptoms. In subgroup 2, thrombosis was detected in 5 (25,0%) patients during post-COVID-19 period (4 patients had pulmonary embolism and 1 patient had a combination of pulmonary embolism and acute ischemic stroke). Thrombotic events had occurred before visit 1, at 40,0 (33,0; 45,0) days from the onset of COVID-19, which corresponded to 16,0 (15,0; 18,0) days after the end of anticoagulant therapy. Age, gender, body mass index, and comorbidities (hypertension, obesity, diabetes) were not associated with the occurrence of thrombotic events. Risk factors included severe COVID-19 ($p=0,04$) and the presence of hereditary thrombophilia.

Conclusion. The risk of thrombosis in post-acute COVID-19 period is higher in patients after severe course of the acute period of COVID-19, in the absence of anticoagulant therapy during the post-COVID-19 period. On the other hand, the administration of anticoagulants during at least two months from the onset of COVID-19 symptoms, decreased the risk of thrombosis in the post-COVID-19 period not only in patients with severe course but in patients with critical course of the acute period of COVID-19 as well.

Key words: COVID-19, post-COVID-19 period, thrombosis, pulmonary embolism, anticoagulants.

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