**Objective.** This study aimed to determine the prevalence and risk factors of new cases of coronary heart disease

(CHD), arterial hypertension (AH) and diabetes mellitus in patients with new coronavirus infection (COVID-19).

**Methods.** This open comparative, prospective study included 658 patients: 111 (16.8 %) men and 547 (83.2 %)

women aged from 25 to 44 years — 432 (65.6 %), from 45 to 59 years — 226 (34.4 %) subjects. Depending on the

history of COVID-19 infection (between March 2020 and June 2021) patients were divided into two groups. The

main group included 416 patients (63.2 %) aged 40 (33; 47) years who had history of COVID-19 (343 (82.5 %) with

mild, 56 (13.5 %) with moderate-to-severe course, 17 (4 %) with severe course); the comparison group included

242 (36.8 %) patients aged 41 (32.8; 47) years who did nothave COVID-19.

**Results.** There was a statistically significant increase of systolic blood pressure (SBP) (from 127 to 129 mm Hg,

p = 0,006), number of hypercholesterolemic (from 6,7 % to 48,3 %, p < 0.001) and overweight patients (from 40.1 %

to 75.9 %, p < 0.001). During the observation period, one in four (23.3 %) young and middle-aged subjects developed: 8.6 % hypertension, 6.3 % diabetes mellitus (DM), and 5.5 % CHD. The estimated risk of premature cardiovascular events after COVID-19 was 74 % higher than in the comparison group. In the group of patients who developed new cases of AH, CHD and DM, moderately severe (p < 0.001) and severe course (p = 0.002) of COVID-19 with subsequent admission to hospital were registered more frequently. In the group of patients who did not develop new cases of studied events mild disease course (p < 0.001) of COVID-19 was more prevalent.

**Conclusions.** One in four patients aged 18 to 59 years may develop cardiovascular event as the long term COVID-19 complication. The risk of premature cardiovascular events after COVID-19 infection was 74 % higher than in a group of people of similar age and sex. Smoking, hypercholesterolemia, excess body weight, three or more

cardiovascular risk factors may be considered as factors for timely stratification of patients due to the risk of developing CHD or DM.