Anxiety and depression among ambulatory and hospitalized patients with cardiovascular long-COVID-19 presentation referred to cardiology consultation after COVID-19 infection

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Funding Acknowledgement: Type of funding sources: None.

Introduction: COVID-19 is connected with varying degrees of emotional stress. Patients (pts) who are hospitalized with severe COVID-19 (C19) are located in single rooms without a permanent attendant to prevent contamination. All personnel serving these pts come into contact with patients with personal full-body protective garment. Ambulatory C19 pts, usually with less severe presentation, are treated in more comfortable conditions.

Purpose: To evaluate the impact of the psychosocial changing conditions on individuals' psyche and to analyse the differences in terms of experienced anxiety and depression among the ambulatory and hospital patients referred to post-C19 cardiology consultation.

Methods: The study involved 388 pts with persistent cardiovascular symptoms, including 198 ambulatory patients (130 females and 68 males) and 190 hospital patients (128 females and 62 males) referred to the cardiology consultation (mean age 4.9 ± 12.9 and 50.5 ± 14.4 years, respectively). The data were collected using the specially designed questionnaire related to descriptive characteristics of the patients and to standardized questionnaires: the State-Trait Anxiety Inventory (STAI) and Beck's Depression Inventory (BDI).

Results: Abnormal psychological metrics was common in the study pts. Indicators of anxiety were lower in the ambulatory than in hospitalized pts ($p<0.001$). Depression level was also lower in the ambulatory pts ($p<0.001$). The same differences were statistically significant in both female and male pts subsets. However, anxiety and depression were more pronounced among female than male pts. Very strong positive correlation was observed between anxiety - state and depression among ambulatory patients, both females and males ($p<0.05$).

Conclusions: C19 convalescents with persistent symptoms of presumed cardiovascular origin present with abnormal psychological traits including increased anxiety and depression especially in individuals requiring hospital treatment. For this reason, it is necessary to plan the interventions particularly in hospitalized pts to reduce their anxiety and depression levels and to create psychological support programs.

Table 1. The mean values of the anxiety in the subgroups.

VARIABLES	AMBULATORY PATIENTS	HOSPITALIZED PATIENTS
ALL	6.1±5.4	20.6±20.3[*]
MALES	6.2±5.8	19.6±17.1[*]
FEMALES	6.1±5.2	21.2±21.8[*]

Statistically significance *$p<0.001$

Table 2. The mean values of the depression in the subgroups.

VARIABLES	AMBULATORY PATIENTS	HOSPITALIZED PATIENTS
ALL	4.7±3.9	14.9±14.6[*]
MALES	4.8±4.2	11.7±14.1[*]
FEMALES	4.6±3.8	16.3±14.6[*]

Statistically significance *$p<0.001$