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Cardiovascular Patients in the Light of Ukrainian Crisis

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Abstract: ***The morning of February 24 2022 was not an ordinary morning for all Ukrainians, who woke up by exploding rockets, fighters dropping missiles from all sides, and alarms breaking through the morning fog. Today I am here in Ukraine, a year after the war eruption, wandering between hospitals, meeting doctors, and many witnesses of war - wounded civilians and soldiers, trying to study the remnants of that aggression, its worrying results, and their consequences on chronic diseases in cardiology.***

Keywords: Ukraine, humanitarian crisis, stress, cardiology, war.

Ukrainian people, like those of many other nations, struggling today to reconcile themselves to the appalling consequences of war: The Office of the United Nations High Commissioner for Human Rights recorded 21, 793 civilian casualties in the country: 8, 173 killed and 13, 620 injured, over 12 million people in Ukraine, almost a third of the country's population, have been forced to leave their homes, facilities have been destroyed, supply chains severed, and medical professionals are among those forced to flee. [1]

Before the escalation on February 24, cardiovascular disease (CVD) was the leading cause of death in Ukraine, accounting for two - thirds of all deaths. Prior to the conflict, 14% of the adult population in Ukraine (approximately 6 million) were estimated to have a history of CVD, including heart attack, angina, or stroke. Prevalence increased with age, with 31% of those aged 60 - 69 years having a history of CVD. Prior to the conflict, 35% (10.8 million) of the adult population in Ukraine were estimated to have hypertension, with an absence of control reported in 85%. Prevalence increased with age, with over 70% of those aged 60 - 69 reported to be hypertensive. If an estimated 4 million people are expected to flee Ukraine, of whom half are adults, there are expected to be approximately 300 000 refugees requiring treatment for CVD, and 700 000 refugees requiring ongoing treatment for hypertension [2].

Cardiovascular patients, are a very sensitive community tominimal such stress triggers. post - acute coronary syndrome anxiety may be transient for some patients, or persists for up to 1 - year post - event, suggesting that for many patients with heart disease, anxiety is a chronic condition!

In a recent meta - analysis of 38 studies, Easton and colleagues estimated that 32% of patients with heart failure (HF) experience elevated levels of anxiety, and 13% meet criteria for achronic anxiety disorder, and among patients who have undergone implantation of an implantable cardioverter defibrillators, elevated anxiety is present in approximately 20 - 40% of cases. [3]

Conceptually, responses to stress are classified into physiological, cognitive, affective, and behavioral responses.

Physiological level, include the various components of the fight - flight responses of the autonomic nervous system, increasing mainly blood pressure, heart and respiratory rates, inducing inflammatory markers that play a key role in the development and progression of different cardiac diseases.

Also, endothelial dysfunction, such changes in the vascular endothelium, dysregulation of platelet activity, thrombosis, increase vascular tone, and leukocyte adhesion, Platelet dysfunction; increased activity and activation of platelets by that inflammatory triggers [4]Stress induced autonomic dysfunction can be observed too, which characterized by disruption in cardiovascular autonomic homeostasis, and maintaining stable beat - to - beat rhythm. Stress hormones released in bloodstream, can compromise the immunologic status too, leaving the immune system less able to resist infections.

On the other hand, cognitive responses to stress include increased worry, maladaptive catastrophic thinking, and rumination, coupled with decreased concentration and correct information processing, depression, anxiety, and anger constitute some affective stress responses, social withdrawal, and behavioral avoidance.

Whereas many Ukrainians forced to escape, walking tens of kilometers on feet during the snowy February, including those with chronic diseases. The attempt to reach the nearest camp, that lacks to minimal health and hygiene requirements, made the mission harder than they expected, therefore, increase substance use and abuse was recorded, which played a negative rule in the way some tried to cope to the situation.

To sum up, patients suffering from chronic diseases, especially in cardiovascular system, are twice victims of wars and stress situations, dread and fear are playing a major role deteriorating their general health status, leading sometimes to irreversible damages, and even death.

Declaration of competing interest: None

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