

RESPIRATORY DISEASES CAUSED BY EXPOSURE TO CHEMICAL AIR POLLUTANTS IN TERRITORY OF HOSTILITIES

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Abstract

The problem of the respiratory diseases in the military and civilians caused by exposure to air pollutants on the territory of hostilities is new for Ukraine. Given the variety of sources of air pollution, the combined exposure to diverse hazards, this issue requires careful research and analysis of experience gained in war zones in different countries of the world.

Aim: analysis of epidemiological and clinical data on air pollution in the territory of hostilities and its influence on respiratory system of the military and civilians.

Materials and methods. Analytical review of scientific publications was carried out using abstract databases of scientific libraries: Pub Med, Medline and text databases of scientific publishing houses Pub Med, Central, BMJ group and other VIP-databases.

Results. In addition to explosive gases, atmospheric air pollutants in the territory of hostilities include vehicle exhaust emission, sulfur mustard gas, organic chlorines, pollutants of burn pits: particulate matter, dioxin, n-hexane, benzene, etc., which form a complex combined effect on the respiratory system. The most common chronic respiratory diseases in combat zone are: bronchial asthma, constrictive bronchiolitis, persistent bronchoobstructive conditions, interstitial lung diseases (hypersensitivity pneumonitis, cryptogenic organizing pneumonia (so called deployment-related lung diseases). Data on functional, imaging, and pathomorphological biomarkers of chronic respiratory diseases are insufficient and inconsistent.

Conclusions: A wide range of air pollutants in the war zone has a combined effect on the health of the military and civilians, leading to the development of inflammatory, allergic, fibrotic, immune-related respiratory diseases. Understanding the mechanism of development of such diseases, determining biomarkers of functional, imaging and pathomorphological signs can be a serious tool in the diagnosis of respiratory diseases in the military and civilian population in the war zone.

Key words: respiratory diseases, the territory of military operations, exposure to chemical air pollutants.

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