CHAPTER 8

THE IMPACT OF GLOBAL CLIMATE CHANGE ON NEUROLOGICAL DISEASES

Mehmet Ufuk ALUÇLU [1]
Muttalip ÖZBEK [2]

INTRODUCTION

Global climate change is defined as persistent climatic alterations that have developed as a result of atmospheric warming caused by greenhouse gas emissions, which in turn stem from increased fossil fuel consumption since the Industrial Revolution. According to the Intergovernmental Panel on Climate Change (IPCC), the increase in greenhouse gas emissions driven by human activities negatively impacts human health worldwide and leads to fatalities. Global climate change is considered one of the greatest health threats of the 21st century (1). Climate change is not limited to rising temperatures; in more temperate regions, sudden cold waves and harsh winter conditions can also occur (2). Moreover, climate change leads to increased air pollution and a higher frequency of natural disasters such as hurricanes, floods, and droughts. While temperature fluctuations directly cause health problems such as heat stroke, flooding, and drought, they also indirectly contribute to issues including food insecurity, water scarcity, air pollution, and the spread of infectious diseases. According to estimates by the World Health Organization (WHO), between 2030 and 2050, climate change-related factors such as malnutrition, malaria, diarrheal diseases, and heat stress are expected to cause approximately 250,000 additional deaths each year (3). All these developments point to an increasingly growing crisis for global health systems.

[1] Prof. Dr. Dicle University, Faculty of Medicine, Department of Neurology, mualuclu@gmail.com, ORCID iD: 0000-0001-5876-8643

[2] Dr., Dicle University, Faculty of Medicine, Department of Neurology, ozbekmuttalip21@gmail.com ORCID iD: 0000-0001-7413-0965.

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of climate change and should apply this awareness in diagnosis, treatment, and patient education processes (70).

5. **Mental Health Services Should Be Adapted to Climate-Related Psychological Impacts:** Psychosocial support services for eco-anxiety and post-traumatic stress disorders should be expanded, with accessible and comprehensive psychiatric interventions provided, particularly in post-disaster periods (54).
6. **Scientific Research and Databases Should Be Supported:** Multicenter and long-term studies examining the relationship between climate change and neurological diseases should be encouraged, and the findings should be integrated into policy development processes (71).
7. **International Collaborations and Legal Obligations Should Be Addressed Seriously:** In line with global commitments such as the Paris Agreement, targets should be established to reduce climate-related health issues, including neurological diseases; in this context, the field of neurological health should be included among the priority groups (72).

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