

Recent findings and outlook for the future on environmental hypersensitivity from an epidemiological perspective, focusing on a domestic survey study of environmental hypersensitivity using the international common questionnaire

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ABSTRACT

In recent years, the rapid increase in the number of patients with environmental hypersensitivity (environmental intolerance) has become a worldwide problem, and a close relationship with allergic diseases has been pointed out, although its pathogenesis remains to be elucidated. Over the past 30 years, Hojo have conducted multifaceted epidemiological investigations, including the preparation of a Japanese translation of the international common questionnaire to evaluate environmental hypersensitivity (Quick environmental exposure sensitivity inventory, Electromagnetic hypersensitivity questionnaire etc.), confirmation of its reliability and validity, and the setting of screening thresholds unique to Japan. I have also been collaborating on research with Dr. Lin-lin Haung in Taiwan since 2008.

Environmental hypersensitivity is a health disorder characterized by a variety of systemic symptoms, including autonomic and endocrine symptoms, immune and allergic symptoms, chronic pain and fatigue, memory and emotional disorders, and hypersensitivity to external environmental stimuli in daily life (light sensitivity, sound sensitivity, smell sensitivity, air pressure sensitivity, multiple chemical sensitivity, and electromagnetic hypersensitivity). Its typical examples are sick house syndrome (sick building syndrome), multiple chemical sensitivity, and electromagnetic hypersensitivity. The pathological mechanism of environmental hypersensitivity can be explained by the three-stage hypothesis; genetic, initiation, and triggering stages. The first stage is genetically determined factors, related to the stress response. In the second stage, the person is exposed to environmental stress (chemical, biological, and electromagnetic factors), becoming a susceptible person to be intolerant to environmental stress. In the third stage, environmental stress at a daily level which would not bother normal persons develops a sensitive person with generalized physical problems.

In this symposium, we will talk about the latest findings on environmental hypersensitivity and some of the epidemiological studies conducted by the authors in Japan and Taiwan using the international common questionnaires.