

Environmental Factors and Multiple Sclerosis : A Systematic Review

Yuki SATO¹⁾, Yuka INAMURA¹⁾, Yuki SENDA¹⁾,
Risa ITOU¹⁾, Maki ONO¹⁾, Natsuko MIMATA¹⁾,
Takahiko HIRAI¹⁾, Chikayoshi NARITA¹⁾, Ryuta YANO¹⁾,
Junichi MARUYAMA¹⁾, Junko OKADA¹⁾, Keiko TANAKA²⁾
and Yoshihiro MIYAKE²⁾

¹⁾*Third-year Medical Student, Faculty of Medicine, Fukuoka University*

²⁾*Department of Public Health, Faculty of Medicine, Fukuoka University*

Abstract : Multiple sclerosis (MS) is one of the most common idiopathic inflammatory demyelination diseases of the central nervous system, but its etiology still remains to be elucidated. This study conducted a systematic review in regard to evidence of a relationship between environmental factors and MS. The review identified 66 articles for analysis out of 412 papers that had been published since 2000 and which were selected by an electronic search of the PubMed database using keywords relevant to epidemiological studies. Conflicting data thus obtained regarding the relationship between various environmental factors and the incidence of MS. As a result, the evidence was therefore deemed to be inadequate to infer the presence or absence of a causal relationship between various environmental factors and MS. However, the evidence did suggest a positive association between MS and smoking, Epstein-Barr viral infections, and a family history of MS. The application of these findings to Asian populations, including Japan, may not be appropriate because all of reviewed studies were carried out in Western countries. Further studies on the incidence of MS are therefore required to definitively identify and confirm the existence of relationship between environmental factors and MS, especially in Japan.

Key words : Environmental factors, Systematic review, Multiple sclerosis, Evidence based preventive medicine