

PS-033. Chronic Exposure to Pesticides and Parkinson Disease

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Aim and material, Methods: While the prevalence of Parkinson's disease differs between 80,6 and 187 out of hundred thousand in the world, this prevalence has been reported as 111 out of hundred thousand in our country. The purpose of this review, which has been conducted by examining national and international literature, is to attract attention to pesticide exposure which one is of the preventable risk factors of this disease the prevalence of which is thought to increase in our aging society. **Results:** Studies conducted in literature emphasize the association between pesticide exposure and psychiatric and neurological diseases such as depression, Alzheimer's disease, Parkinson's disease and ALS. In some studies, the risk of developing Parkinson's disease has been found high in individuals who carry GSTP-1 genotype of glutathione which ensures the metabolization of pesticides. In a study conducted in England, pesticides that contain especially rotenon and paraquat have been found to be associated with Parkinson's disease. Experiments conducted with animals and cell culture studies have also shown that pesticide exposure causes neurodegenerative changes that cause the development of Parkinson's disease. When compared with European Union countries, the amount of pesticide per hectare in our country is far more behind these countries. However, in Mediterranean, Aegean and Marmara regions where agriculture is carried out intensively, pesticide use has approached the level of developed countries. Thus, pesticide residues on food come out as a factor that threatens public health. **Conclusion:** Studies conducted show that chronic pesticide exposure can cause Parkinson's disease with neurodegenerative processes. In line with the data obtained, it has been concluded that primary and secondary protection measures should be conducted to minimize the exposure of both agriculture workers as those who apply pesticide and consumers who will be exposed to pesticide residues.

Keywords: pesticide, Parkinson's disease, biocidal products