Effects of Methylmercury Exposure on Junior High School Children Born in 1955–58 Near Minamata Bay

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Results of functional disturbance tests on junior high school children who were born in the same period and district as those of congenital Minamata disease patients in 1970, were reviewed. The functional disturbance tests consisted of a match board test, a tapping test, a color naming test, a flicker test, as well as tests on agility run, pain sensation and vibration sensation, and audiometry. The results of match board, tapping, agility run, pain sensation and vibration sensation tests showed significant differences among the polluted area and the control area. In the cases of match board and tapping tests, the distribution seemed to shift to lower values. On the other hand, the shift of the distribution to lower values was considerable in the agility run, pain sensation and vibration sensation tests. Functional disturbances of hand dexterity as observed from the match board and tapping tests and of agile movement as observed from the agility run test, as well as hypersthesia and loss of vibration sensation were observed. We regarded the subclinical dysfunctions observed in this study as the effect of methylmercury, on the basis of the features of clinical congenital Minamata disease. The preliminary report of follow-up tests on the study population, which was conducted through home visitation and interviews 27 years after the initial survey, was summarized.