The fourth nationwide survey of multiple sclerosis (MS) disclosed that the estimated number of MS patients in Japan was 9,900, and the estimated prevalence rate of MS is 7.7 per 100,000, indicating that the number of MS patients has been rapidly increasing for the past 30 years. The demographic features of the present series were compared with those of the three past nationwide surveys. The ratio of female to male patients has increased from 1.3 to 2.9. As to distribution of age at onset, in 2004, the peak of the age at onset curve shifted from the 30s to 20s and the second peak at 50s seen in the 1989 survey disappeared this time. About 60% were conventional MS (CMS) while 20% were opticospinal MS (OSMS) plus optic-brainstem-spinal MS (OBSMS). The female to male ratio was significantly greater in OSMS than in CMS, and age at onset was also significantly higher in OSMS than in CMS in both male and female. By distribution of age at onset, CMS showed a single peak in the early 20s while OSMS showed the highest peak in the early 20s and a second peak in the 30s. Both visual impairment at onset and severe visual impairment during the course have decreased to about half of those found in the first survey, while frequencies of both quadriparesis and transverse myelitis considerably decreased in 2004 compared to 1989 in addition to a decrease of visual impairment. Disease progression was significantly faster with advancing age at onset. In respect to the McDonald criteria, dissemination in space was fulfilled in 45.5% in CMS while only in 8.2% in OSMS patients. Spinal cord
lesions were found in more than 90% of OSMS and 70% of CMS patients. Longitudinally extensive spinal cord lesions extending over 3 vertebral segments were detected in 41.2% of OSMS and 16.7% of CMS patients. In conclusion, the fourth nationwide survey disclosed significant changes in the prevalence and demographic features of MS in the Japanese population.

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