In 1988–97, the incidence rate of multiple sclerosis in Västerbotten County was 5.2/10^5 (95% confidence interval, 4.4 to 6.2); 6.7/10^5 (6.0 to 8.3) in women and 3.7/10^5 (2.7 to 4.9) in men. The crude incidence rate of multiple sclerosis in 1988–97 in Västerbotten County was 5.2/10^5 (95% confidence interval, 4.4 to 6.2); 6.7/10^5 (6.0 to 8.3) in women and 3.7/10^5 (2.7 to 4.9) in men. The
onset adjusted prevalence for 31 December 1997 was 154/10^5 (139 to 170): 202/10^5 (179 to 228) in women and 105/10^5 (89 to 125) in men. When compared with a previous estimate of prevalence, a yearly 2.6% increase in prevalence between 1990 and 1997 was found, mainly attributable to a higher incidence than mortality.

Conclusions: The present incidence rate and prevalence confirms earlier findings that Västerbotten is a high risk area for multiple sclerosis. The adjusted incidence was twice as high as the incidence from 1974–88 in the only previous Swedish population based study from Göteborg, but comparable with other recent Fennoscandian multiple sclerosis incidence rates.

Keywords: multiple sclerosis; incidence; Sweden

Geographical variation in multiple sclerosis occurrence has challenged researchers since the beginning of the 20th century. Incidence data from different areas in Scandinavia are available and have been compared. Population based studies of multiple sclerosis incidence in Sweden have previously only been done in Göteborg in south west Sweden. Our aim in this study was to investigate multiple sclerosis incidence and prevalence in Västerbotten County in northern Sweden—using multiple sources for case identification and follow up interviews, together with medical records for data collection and case ascertainment—and to provide a base for further follow up studies.

METHODS

Västerbotten County is located in northern Sweden at 64–65°N latitude. It is sparsely populated with 255,987 inhabitants at the midpoint of the incidence period 1988–97, and 259,163 on the prevalence day, 31 December 1997, in an area of 55,432 km².

The database used in a previous study, with the prevalence day 1 January 1990, was extended using the same multiple sources. A computerised data register search from all three hospitals in Västerbotten County was extended through year 2000. Inpatients were selected from the neurology (also outpatients), neurosurgery, neurorehabilitation, internal medicine, ophthalmology, paediatric, and geriatric clinics with ICD codes corresponding to the following diagnoses: multiple sclerosis, demyelinating disorders in CNS, optic neuritis, spastic paraplegia, ataxia, myelopathy, spinocerebellar disease, and myelitis. In addition we used six other sources:

- Register for CSF electrophoresis analyses 1988–2000: analyses with presence of oligoclonal bands or signs of intrathecal IgG production were recorded.
- General practitioners, 1988–98: in April 1998 all general practitioners were contacted by letter; we asked for information on patients with multiple sclerosis or inflammatory disorder of the central nervous system for the past 10 year period.

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