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Increasing frequency of multiple sclerosis in Padova, Italy: a 3 year epidemiological survey.


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OBJECTIVE: To determine the incidence and prevalence rates of multiple sclerosis (MS) and their temporal profiles over the last 30 years in the province of Padova (northeast Italy).

BACKGROUND: In the early 1970s an epidemiological survey in the province of Padova showed a MS prevalence and incidence of 16/100 000 and 0.9/100 000 population, respectively; these figures are much lower than current estimates in other regions of Italy and Central Europe.

METHODS: The population of the study area was approximately 820 000 (422 028 women, 398 290 men) in the 1991 census. All possible sources of case collection were used, but only clinically definite/probable and laboratory-supported definite/probable MS were considered in the analysis of incidence and prevalence trends from 1971 to 1999.

RESULTS: On 31 December 1999, the crude prevalence rate was 80.5/100 000 (95% CI 70.3-90.7); prevalence was higher in women (111.1/100 000; 95% CI 99.0-123.1) than in men (49.7/100 000; 95% CI 41.3-58.1). This difference was significant (F/M = 2.43; z = 10.1, P < 0.00001); a rate adjusted for the European population was 81.4/100 000. On 31 December 1980, and on 31 December 1999, the estimated prevalence rates were 18/100 000 and 45.7/100 000, respectively. Thus, a fivefold increase in prevalence was observed from the 1970s. The mean annual incidence was 2.2/100 000 in the period 1980-89, 3.9 in the period 1990-94 and 4.2 in the period 1995-99. Thus, incidence increased more than fourfold from the 1970s through 1994 and remained quite stable in the last several years. Mean age at onset was 31.3 +/- 9.88 years. Mean diagnostic latency decreased significantly from 49.2 +/- 44.5 months in 1985 to 23.0 +/- 30.3 months in 1990; 12.9 +/- 15.61 in 1995 and 5.3 +/- 4.7 in 1999.

CONCLUSIONS: The actual prevalence (80.5/100 000) and incidence (4.2/100 000) of MS in the province of Padova agree with the most recent epidemiologic estimates/trends observed in other Italian and European areas, except for
Sardinia and Scotland. The increase in both incidence and prevalence rates observed in much of this region over the last 30 years parallels the introduction of more sensitive diagnostic techniques and a highly significant decrease in diagnostic latency. These findings probably do not support a real increase in the frequency of MS in northeast Italy because recent estimates of incidence have increased only slightly (3.9 to 4.2, which is <10% in five years) and increase in the prevalence rate was almost completely due to the accumulation of new incidence cases.

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