



Epidemiology of multiple sclerosis – a population-based, Germany-wide study

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Abstract

Background:

Multiple sclerosis (MS) is the most common autoimmune disease of the central nervous system. For Germany, the diagnostic prevalence in outpatient and inpatient care was 0.29 % for the year 2010. To date, no more-recent prevalence data is available, and there remains a lack of estimates as to the number of new cases arising each year in the German regions. The aim of this study was to analyse the current trend in MS prevalence in Germany over the years 2009 to 2015 and to estimate the cumulative incidence for the year 2015 with a particular focus on studying regional differences in MS disease burden.

Methodology:

Using Germany-wide claims data of outpatient care, the annual diagnostic prevalence of MS was defined as the proportion of insured persons who received a reliable diagnosis of MS (ICD-10-GM: G35.-) in at least one quarter of the reporting year in question and at least one further such diagnosis within the subsequent three quarters. The cumulative incidence was estimated for the year 2015. Insured persons were considered to be incident cases of the disease if they first met the case definition in 2015 after an MS diagnosis-free pre-observation period (2009–2014).

Results/Conclusion:

The age- and gender-standardised diagnostic prevalence of MS in Germany rose steadily over the course of the study from rounded 0.25 % in 2009 to 0.32 % in 2015 (+29 %). In all years, women were affected nearly 2.5 times as often as men. For both genders and in all years, the highest prevalence was found in the 45–54 age group. The estimated cumulative incidence was put at 18 new cases per 100,000 insured persons and therefore significantly exceeded estimates in former studies from individual German regions. The spatial distribution of prevalence and incidence was highly heterogeneous, with a high burden of disease in north-west Germany and a clear west–east gradient. Steady increases in diagnostic prevalence over seven years of observation underline the continuously growing importance of multiple sclerosis in the outpatient care setting in Germany. The regional variations in MS disease burden observed here should be taken as grounds for primary epidemiological studies into MS risk factors with a heterogeneous spatial distribution.

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Keywords

Autoimmune disease, diagnostic prevalence, incidence, MS, multiple sclerosis, neurology

Citation

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