Prevalence of multiple sclerosis in five rural Suffolk practices

M J Lockyer

Abstract

***Objective*—To determine a point prevalence of multiple sclerosis in part of Suffolk.**

***Design*—Multiple source search for patients with multiple sclerosis in five general practices. Patients were reviewed and categorised by using general practice notes.**

***Setting*—Five rural general practices in Suffolk, 12 May 1988.**

***Subjects*—31 379 patients registered with five practices.**

***Main outcome measures*—Multiple sclerosis diagnosed by a specialist.**

***Results*—The search produced a provisional list of 62 eligible patients with multiple sclerosis. Review of case notes showed that 48 had probable disease, 10 early disease, and four possible disease. The probable cases gave a crude prevalence of 153/100 000 population (95% confidence interval 109/100 000 to 196/100 000).**

***Conclusions*—Although the results should be interpreted cautiously because of the small sample size, they suggest that the prevalence of multiple sclerosis in Suffolk is higher than has been estimated from hospital data.**

Introduction

Most surveys of the prevalence of multiple sclerosis have been conducted in northern areas of the United Kingdom.[1-5] The prevalence in southern England has been assumed to be lower than that in Scotland and northern England on the basis of hospital statistics, which suggest there are about 30-40 cases per 100 000 population—that is, about one case per list of 2000 patients.[6] A recent study of the point prevalence of multiple sclerosis in a London borough found a prevalence of 115 per 100 000.[7] This is much closer to the figures found in the earlier Scottish studies.[3-5]

Several general practitioners in East Anglia thought that they had more patients with multiple sclerosis on their lists than would be expected from the estimated prevalence for England and Wales. I conducted this study to estimate the point prevalence of multiple sclerosis in five rural practices.

Subjects and methods

I selected five general practices in Suffolk for study. All were designated rural by the family practitioner committee, all were dispensing, and all shared a border with the practice from which the study was organised. Permission was obtained from the local ethics committee.

Lists of patients with multiple sclerosis were requested from five sources: the general practitioners, the district hospitals, the local branch of the Multiple Sclerosis Society, the social services, and the community nurses. Ipswich Hospital did not have a multiple sclerosis register but provided a list of most of the patients in whom multiple sclerosis had recently been diagnosed and visual evoked response records for the past 12 years. One practice in the study referred patients to a neurologist at the Norfolk and Norwich Hospital, who was approached for a list of cases from the practice. The community nurses provided a list of patients with known multiple sclerosis, and the Multiple Sclerosis Society gave access to its membership list. The local social services department did not have a handicap register and could not assist.

Patients' names were included on the provisional list if patients had been recorded as having multiple sclerosis by any one of the sources. The general practitioners' case notes on every patient on the provisional list were reviewed. From these notes multiple sclerosis was categorised by the system of Allison and Millar,[1] which has been used in several other studies. The system recognises three categories of disease: early (recent history, remitting symptoms); probable (remitting course, physical signs of multiple lesions, some physical disability); and possible (findings suggestive of multiple sclerosis but progressive for static course; no definite multiple lesions). Patients were allocated to the probable group only if the diagnosis was stated in a letter from a hospital neurologist or physician. If the case history was suggestive of multiple sclerosis but the diagnosis was not stated the patient was included in the possible category.

The age, the age at onset, duration of illness, and the sex of each patient were also recorded. The names of those patients with probable disease were checked by the local family practitioner committee to confirm all resident on 12 May 1988. The practices gave permission for information on list size on the same date to be obtained. The method described above was based on that used by Williams and McKeran to determine prevalence of multiple sclerosis in Sutton, London.[8] In their study data on discharge from hospital were also obtained and the social services provided information. The patients were reviewed by a neurologist, which was not possible in my study.

Results

Pooling data from all sources gave a provisional list of 81 patients, 19 of whom were removed after examination of case notes. Patients were excluded if they were not resident in the practice area, were resident in the area but not on the list of practices in the study, did not have multiple sclerosis, or had died. Table I shows the number of patients contributed by each of the sources.

Of the 62 patients remaining on the provisional list, 48 had probable disease, 10 early disease, and four possible disease. The probable cases gave a crude prevalence of 153/100 000 (95% confidence interval 109/100 000 to 196/100 000). Table II compares my findings with those of the study in south London.[8] The age distribution of patients identified in the study was

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BMJ 1991;303:347-8

TABLE I—*Number of patients with multiple sclerosis contributed by each source*

Source	No of patients contributed	No admissible to list of all cases of multiple sclerosis (early, probable, or possible)	No of patients untraced by other sources
General practitioners	52	52	
District nurse	4	4	
Visual evoked response record	25	13	5
Hospital list	17	14	4
Social services			
Multiple Sclerosis Society	17	12	1

TABLE II—*Characteristics of patients with multiple sclerosis, and prevalence in Suffolk and in Sutton, London*[8]

	Suffolk 1988	Sutton 1986
Mean age	49	49
Mean age at onset	36·8	34
Mean duration (years)	10·9	15·4
Sex (M:F)	1:2·4	1:2
No (%) with early disease	10 (16)	*a* (15)
No (%) with possible disease	4 (6)	*b* (10)
No (%) with probable disease	48 (77)	*c* (75)
Total population surveyed	31 379	169 600
Crude prevalence (95% confidence interval) (cases/100 000 population)	153 (109 to 196)*	115 (99 to 131)†

*Calculated for only probable cases.
†Calculated for probable and possible cases.

TABLE III—*Age distribution of patients with multiple sclerosis*

	No of patients
0-19	1
20-29	4
30-39	10
40-55	29
55-64	15
≥65	9

consistent with that expected for a population of patients with multiple sclerosis (table III).[6]

Discussion

The raw prevalence found in this study is higher than that found in other first studies of areas in the United Kingdom. The results must be interpreted with care, however, because the small population makes the possibility of error in the numerator (number of cases of multiple sclerosis) and the denominator (total number of patients) high. The methods of categorisation of the patients and the absence of age and sex standardisation could give artificially high results compared with those of previous studies.

The diagnoses in the patients were not confirmed in this study, but to allow for the fact that some might have been excluded by a neurologist I included only the probable cases in the prevalence calculation rather than probable and possible cases, as used by Williams and McKeran.[8] Standardisation for age and sex was not possible because data on the studied population was not available from either the family practitioner committee or the practices. Improvements in computer records and increased use of age-sex registers should permit standardisation in future studies. The population data for political wards, roughly corresponding to the area studied, suggested that there were slightly more people than expected aged under 34. There was no evidence of a larger than expected elderly population, which might have given a falsely high prevalence.

Point prevalence, which was calculated in this study, will give a lower estimate than a period prevalence. Williams and McKeran also calculated a point prevalence,[8] and although it was not possible to standardise for age and sex, the other parameters calculated matched closely in the two studies (table III), which suggests that comparison of the results is valid.

No other reason for artificial clustering of patients with multiple sclerosis was apparent. There was a hyperbaric oxygen unit at Claydon, within 16 km of the area studied. Two patients were recorded as having attended, but there was no evidence of an influx of people with multiple sclerosis to use the facility.

Suffolk Family Practitioner Committee could provide only an estimate of the practice population, which could have caused denominator error. The committee estimated that their figures were accurate to approximately 0·5% (156 patients) for the five practices in this study (personal communication).

Williams and McKeran found a point prevalence for multiple sclerosis of 115 per 100 000 (95% confidence interval 99 to 131), which is much higher than the previously accepted estimate of prevalence of multiple sclerosis in southern Britain. Although my study was on a small population, the results support their findings.

I thank all the people who have helped me with this project and, in particular, Drs Fielder, Grundy, and Egan, Dr Hawkes at Ipswich Hospital, and the Ipswich Multiple Sclerosis Society. I also thank Dr C Astbury for help with statistics; Kate and Michael Trevitt for helping me set the text and illustrations; and Drs Williams, Roland, Booton, and Gogarty for encouragement.

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(Accepted 29 May 1991)

THE MEMOIR CLUB

The sound broadcasts were relaxed, passed off easily, and were without incident except on one occasion. Isaac Deutscher and I were teamed with an expert and delightful writer. Each was to talk on a chosen subject for a few minutes and then the others were to join in and knock it around until the next one's turn. We dined together before the programme; the writer was friendly but seemed nervous and dined mostly on whisky. We went to broadcast, each carrying the one statutory glass you are allowed to take with you to a studio, the chairman made an introduction, and I went in first, speaking about education. Isaac Deutscher then joined in the discussion of my topic with me as planned, but our writer said no word. When the chairman tried to bring him in, he indicated that he had no intention of talking about anything except his own chosen subject. Whereupon he leaned back with satisfaction, drained his glass, and relaxed at his ease. The producer could be seen through the glass partition raising eyes and hands to heaven in despair. At this point the chairman made a fatal mistake: as Isaac Deutscher talked on, he wrote on a piece of paper YOU ARE PAID TO TALK and held it in front of the writer's eyes. The contented if rather glassy look vanished suddenly from his face, anxiety took its place, he leaned forward almost touching the microphone, took a deep breath and said, "Balls." He then sat back horrified at what he had done and took little further part in the proceedings. To our credit we carried on as though nothing in the least unusual had occurred and recorded for three quarters of an hour. The producer had decided that the programme could not be done again in time and that there must be plenty of footage to be cut to the 29 minutes prescribed. I never heard it on the air. There must be some gems in the cutting rooms of the BBC.

From *Not a Moment to Lose* by David Smithers. Published under the *BMJ*'s Memoir Club imprint. ISBN 0 7279 0278 4. Price: Inland £14.95; abroad £17.50. BMA members: Inland £13.95; abroad £16.50.