

have lesions of the disease, though the suspicion is that it must be high,³ and surprisingly large numbers of "silent" cases of multiple sclerosis have anatomical lesions at necropsy. Certain it is that multiple sclerosis (especially in its mild "subclinical" form) is very much more common than believed. If the families of the patients recorded by Drs Williams and McKeran were studied we can be sure that many more "minimal" and "subclinical" examples of this wide spectrum disease would come to light. It is indeed likely that the high figure for Orkneys and Shetland is the norm.

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SIR,—We should like to echo the comments made by Drs Edward S Williams and Ronald O McKeran that prevalence estimates for multiple sclerosis in the United Kingdom of "over 30-40/100 000" are likely to be rather wide of the mark and that a north-south gradient may have been overemphasised.

As part of a survey funded by the Multiple Sclerosis Society on the impact on the family and the degree of handicap in multiple sclerosis we have a provisional list of over 480 names in the Southampton and South West Hampshire Health District, which has a GP registered population of about 430 000. We have found that a rather higher proportion (62%) of people with multiple sclerosis are known to their general practitioners. However, it is essential to verify the diagnosis, especially in milder cases, for there are some people who do not actually have multiple sclerosis, despite their general practitioner's belief to the contrary.

If a similar relation holds between our provisional list and our final list as in the authors' study, we are likely to have prevalence figures significantly greater than 100/100 000 for a population which approximates more closely in size to the north east Scotland study populations.

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SIR,—Drs Edward S Williams and Ronald O McKeran have carried out a valuable survey of multiple sclerosis in southern England, but their general conclusion that "the latitudinal effect on the prevalence of multiple sclerosis in the United Kingdom is less appreciable than previously believed" may be premature. They have obtained an estimate for point prevalence of multiple sclerosis in 1985 of 115/10⁵ with an incidence of 5/10⁵/year for the period 1976-84. However, the superficial similarity of their statistics to those published by Shepherd^{1,2} in the early surveys from north east Scotland (prevalence of 127/10⁵ in 1970 and an incidence of 5.3/10⁵/year in 1959-73) may be obscuring a real difference between north and south.

As Drs Williams and McKeran indicate, almost without exception, the estimated prevalence of multiple sclerosis in the United Kingdom has increased with time, partly due to a fall in mortality. Shepherd derived a revised estimate for prevalence of 144/10⁵ in 1973, including 50 patients not

identified during the first survey, and this figure was further updated in 1980 (178/10⁵).³

Drs Williams and McKeran chose to compare their survey with the first study from Aberdeen because they believed that the methods of ascertainment were similar. Since 1970 laboratory tests for supplementing clinical evidence for the disease and computerised hospital morbidity registers have become more widely available. Drs Williams and McKeran had access to these facilities in identifying potential cases of multiple sclerosis and recruited patients from their own and other hospitals in London so they are likely to have made a more complete ascertainment than was achieved initially in Aberdeen. In addition their prevalence was estimated from medical records; ascertainment in studies where patients are not reviewed personally is inflated since diagnostically doubtful cases are less easily excluded.⁴ It might therefore have been more appropriate to have compared the prevalence in Sutton with the more recent and significantly higher estimate from Aberdeen. Evidence for a north-south gradient in disease frequency is also available from routine statistics. Apart from changes with time, mortality attributable to multiple sclerosis has been consistently higher in Scotland than in other parts of the United Kingdom since the 1940s, and at present the standardised mortality ratio is 123 (England and Wales 1951-75=100).³ Scotland also has the highest hospital discharge rates for multiple sclerosis (44% above the national average from 1976-80).

The issues raised by Drs Williams and McKeran are important since regional differences in the distribution of multiple sclerosis have been widely interpreted as implicating environmental events in its aetiology; elsewhere we have suggested that variations in the frequency of the disease within the United Kingdom are significantly influenced by regional differences in the normal frequency of the HLA alleles DR2 (and DQw1) associated with multiple sclerosis.⁵ In making these correlations we are aware that there are too few areas where simultaneous prevalence and immunogenetic studies have been carried out. It would therefore be of considerable interest to know the frequencies of HLA-DR2 and DQw1 in patients and controls from Sutton.

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Implications of a district scheme to provide plastic insulin syringes to diabetics

SIR,—The report by Dr A P Allen and colleagues (28 June, p 1710) adds solid support to the belief that plastic syringes are the treatment of choice for diabetics on the grounds of economy to the health service as well as of safety, comfort, and convenience for the patients. This view now must be (or should be) held universally by doctors responsible for the care of diabetic patients, is mirrored by the experience of diabetic clinics in Strathclyde^{1,2} and London,³ and should add valuable endorsement to the parliamentary campaign which the British Diabetic Association is mounting to

persuade the department of health that this equipment should be generally available on prescription. However, clinicians must also remember that plastic syringes can be used for purposes other than the injection of insulin and should consider what measures might be necessary to prevent the abuse of this disposable equipment.

Eleven hundred patients with insulin treated diabetes attend our unit at Glasgow Royal Infirmary. About one third of the patients have a single daily insulin injection and the remainder take two or more injections per day. In March 1983, when U100 insulin was generally introduced in the UK, we took the opportunity to offer Becton-Dickinson plastic syringes to all our patients and to abandon the use of glass syringes with steel needles. As of June 1986, virtually the whole clinic population has used disposable equipment for the past three years.

By encouraging the reuse of plastic syringes we have established that patients who take a single daily insulin injection use about 50 syringes a year, while patients who take multiple daily injections use an average of 80 syringes per annum. Each year, therefore, we dispense almost 80 000 syringes to our patients and in the past three years have issued nearly a quarter of a million syringes. Some time ago we became aware that some plastic syringes were being obtained by drug abusers for the injection of hard drugs: our unit was known to hold stocks of this equipment and theft became a problem. The unit operates an open door policy of informal self referral, and individuals who were not diabetics would present themselves to the staff (usually late or early in the day), claiming to be one of our patients and requesting a further supply of syringes. Other drug addicts obtained these syringes from other sources, possibly from domestic refuse.

Over the past year, we have addressed this potentially serious problem by implementing several measures. Firstly, we have ensured that stocks of plastic syringes which are outwith the hospital pharmacy are retained in a single place which is properly secured. Secondly, we have issued all our patients with a simple record card which identifies them as patients who take insulin and attend the unit: the card must be produced and countersigned by nursing or medical staff before syringes are issued. Thirdly, we have offered disposable containers (Cin-bins, Labco Ltd) to any patient who experiences difficulty with the disposal of domestic refuse; these containers hold several hundred syringes and are brought back to the hospital for incineration. Finally, we have encouraged patients to use the simple and inexpensive commercial device (BD Safe-Clip, Becton-Dickinson) which severs the needle from a discarded plastic syringe and renders it useless.

So far as can be established these measures have been almost completely successful in preventing the abuse of plastic syringes by addicts. Doctors who supervise large diabetic clinics within the urban conurbations of the UK, where drug abuse is regrettably prevalent, should be aware that a similar problem is likely to arise if they dispense large quantities of plastic syringes and should forestall the problem by adopting the kind of measures that we have been compelled to use.

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