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A survey of dizziness management in General Practice

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Abstract
There is little information in the current literature about the management of dizziness in Primary Care (General Practice). An attempt was made to evaluate this by carrying out a postal survey of General Practitioners' (GPs) treatment methods in four Health Authorities in England and Wales. The survey revealed that eight out of every 1000 individuals are likely to consult their GP on account of dizziness in a 12-month period. The symptom is most common in the 60–80 years' age group, with 'labyrinthitis' being the commonest diagnosis. In the majority of cases (74.9 per cent) there was an improvement in the symptoms and only 13 per cent were referred to a specialist clinic. The survey also highlighted the need for additional resources to improve the management of these patients.

Key words: Dizziness; Family Practice; Questionnaires; Disease Management

Introduction

Dizziness is often a perplexing problem in Primary Care practice accounting for two per cent of consultations in the United States.[1] Its prevalence increases with age and may be as high as 30 per cent in subjects over 65 years of age.[2] In Britain each year, 15 out of every 1000 patients consult their General Practitioner (GP) on account of symptoms that are classified as vertigo, dizziness or giddiness.[3]

Dizziness is known to be associated with long periods of absence from work and high levels of anxiety for the patient.[4,5] It is a symptom that many GPs regard with despair on account of its complex presentation,[6] yet there is very limited information on the management of dizziness in a Primary Care setting in the UK. In a review of vertigo in Primary Care, it was shown that little was known about the types of dizziness that occur, their management or the proportion of patients referred to specialist clinics.[7] Two other studies discussed referral patterns and the prevalence of dizziness in the community.[8,9] Information about the management of patients with dizziness in Primary Care is of paramount importance. It could influence the allocation of resources and may even highlight the need for further training in this field for doctors and other medical personnel.

The aim of this survey was to examine the current practice of the management of dizziness by GPs in our Health Authority (HA)-West Surrey and in three other HAs in England and Wales.

Materials and methods

A questionnaire was designed to obtain information about the management of dizziness in General Practice. The questionnaire was based on a similar questionnaire used for a postal survey of tinnitus management in General Practice.[10] A pilot study was carried out with the help of local GPs. The pilot study suggested that no changes were necessary, and the original questionnaire was therefore used in the survey (Appendix).

The survey covered four HAs in England and Wales. These were:

(1) West Surrey Health Authority (England);
(2) Barnet, Enfield and Haringey Health Authority (England);
(3) Southern Derbyshire Health Authority (England);
(4) Iechyd Morgannwg Health Authority (Wales).

These HAs were selected because they had similar numbers of Health Centres (GP surgeries) in their catchment area. A list of GPs and their contact details were obtained from each HA. Twenty-five GPs were selected at random from each area. A covering letter was sent with the questionnaire to each of the selected GPs. The letter explained the purpose of the study. The Practitioners were requested to respond to the questions based on their experience in the management of patients with dizziness during a 12-month period (August 2000–July 2001). A pre-paid envelope was also enclosed with these documents. If a reply was not

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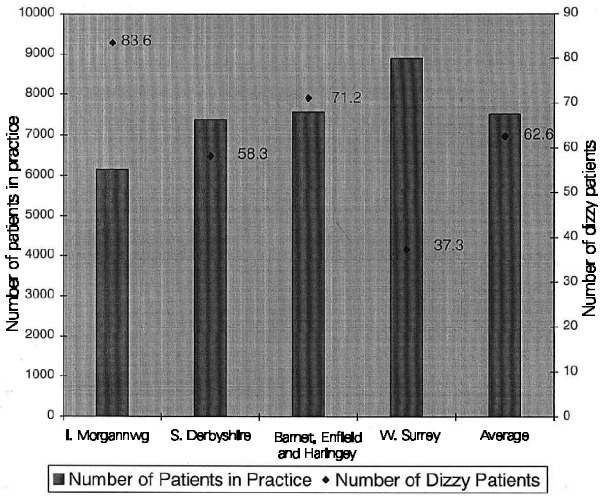

FIG. 1

Average number of patients in each practice and average number of patients with dizziness seen by each GP in the 12-month period (August 2000–July 2001)

received within 30 days, the GP concerned was contacted by telephone. A second questionnaire was posted if the original letter had not been received.

Results

The total number of questionnaires posted was 100. Of these, 53 completed questionnaires were received. This consisted of 13 from Iechyd Morgannwg, 12 from South Derbyshire, 13 from Barnet, Enfield and Haringey and 15 from West Surrey. There was no response from 41 GPs and six questionnaires were returned unanswered.

In each HA, we calculated the average (mean) number of patients in the practices which participated in the study. This varied from 6157 in Iechyd Morgannwg to 8893 in West Surrey. The average number of patients in all the practices of the survey was 7504. The number of patients with dizziness seen during the survey period by each GP was the least in West Surrey (37) and highest in Iechyd Morgannwg (83). During the period of survey, each GP treated an average of 62 patients with dizziness (Figure 1).

The age groups of patients with dizziness is given in Table I. In all the HAs, the largest number of patients was in the 60–80 year old group with the smallest number in the five to 20-year-old group.

The pattern of treatment of a dizzy patient was similar in all HAs (Table II). Overall 69 per cent of patients were given medication, 26.2 per cent received counselling, 5.8 per cent had physiotherapy and 13.3 per cent were referred on to a specialist clinic. A small percentage of patients (3.9 per cent) received other forms of treatment such as bed rest and reassurance. Patients were referred to specialist clinics in the following order: ENT (69.6 per cent), Neurology (11.5 per cent), Cardiology (3.8 per cent) and General Medicine (4.2 per cent). West Surrey was the only HA where the GPs mentioned that patients were referred to an Audiological Physician. This was responsible for the higher referral rate in the 'other' category (24.5 per cent) in this HA (Table III). Other specialities mentioned by GPs in this category were Geriatrics, Mental Health and Vascular Surgery. However only a few practitioners included these Medical Specialities in the survey.

The most popular drugs used in the treatment of dizziness were prochlorperazine (Stemetil) – 58.9 per cent, betahistine (Serc) – 35.4 per cent and cinnarizine (Stugeron) – 12.4 per cent. A few GPs stated that they also used other drugs such as propranolol, diazepam and aspirin.

The commonest diagnosis made was labyrinthitis in all HAs except Iechyd Morgannwg where benign paroxysmal positional vertigo (BPPV) was diagnosed as frequently as labyrinthitis. In the entire survey, an underlying medical disorder was thought to be responsible for the dizziness in 5.5 per cent of cases while in 14.5 per cent of patients, the diagnosis was not known (Table IV).

The outcome of the various treatment methods is summarized in Figure 2. An improvement in the symptoms was noticed in the majority of cases (74.9 per cent) while in a small number of cases (11.2 per

TABLE I
AGE GROUPS OF PATIENTS IN THE STUDY (PERCENTAGES)

	5–20	20–40	40–60	60–80	Over 80
Iechyd Morgannwg	0.5	7.2	26.5	49.9	15.9
Southern Derbyshire	1.5	13.3	19.4	33.7	32.1
Barnet, Enfield and Haringey	2.4	22	26.4	33.3	16
West Surrey	0.9	11.7	26.3	45	16.1
Average	1.3	13.5	24.7	40.5	20

TABLE II
TREATMENT METHODS USED IN THE FOUR HEALTH AUTHORITIES (PERCENTAGES)

	Medication	Counselling	Physiotherapy	Referral to specialist clinics	Other forms of treatment
Iechyd Morgannwg	62.2	21.2	2	11.2	6.5
Southern Derbyshire	77	21.4	1.5	8.5	0.4
Barnet, Enfield and Haringey	66.2	33.2	13.1	15	7.3
West Surrey	69.3	29.1	6.4	18.6	1.4
Average	68.7	26.2	5.8	13.3	3.9

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TABLE III
PERCENTAGES OF PATIENTS REFERRED TO SPECIALIST CLINICS

	ENT	Neurology	Cardiology	General Medicine	Physiotherapy	Others
Iechyd Morgannwg	70.8	15.2	5.4	7.1	1.5	0
Southern Derbyshire	85.1	4.3	3.1	4.5	0.7	2.3
Barnet, Enfield and Haringey	64.8	15	4.2	4.2	4.2	7.6
West Surrey	57.7	11.3	2.8	1.1	2.6	24.5
Average	69.6	11.5	3.8	4.2	2.3	8.6

TABLE IV
THE DIAGNOSES OF DIZZINESS IN THE FOUR HEALTH AUTHORITIES (PERCENTAGES)

	Labyrinthitis	Ménière's disease	BPPV	VBI	Medical	Unknown
Iechyd Morgannwg	28.5	8.9	29.2	15	4.6	13.8
Southern Derbyshire	45.5	10.5	15	10.8	7.5	10.7
Barnet, Enfield and Haringey	43	4.2	22.8	7.2	6.4	16.4
West Surrey	44.8	6.8	17.6	10.2	3.4	17.2
Average	40.5	7.6	21.1	10.8	5.5	14.5

cent), there was no improvement. In Iechyd Morgannwg there were fewer patients who had improved (63.2 per cent) but in this HA there was also a higher percentage of patients (21.7 per cent) in whom the outcome was not known.

More than 60 per cent of GPs who responded to the questionnaire felt that the service for patients with dizziness could be improved. Direct access to specialist physiotherapy, one-stop Dizzy Clinics, protocols for the treatment of dizzy patients and shorter waiting times for specialist clinics were the most common suggestions for improvement of the service.

Discussion

Franklin and Osborne defined the Questionnaire as 'an instrument consisting of a series of questions and/or attitude opinion statements designed to elicit responses, which can be converted into measures of the variable under investigation'.[11] This method of collecting data was adopted as it is inexpensive and quick to gather data from a wide geographical area.

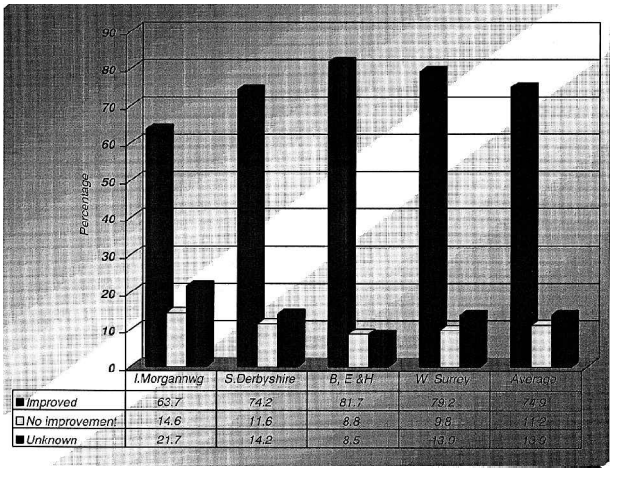

FIG. 2
Clinical outcomes of treatment measures in the study groups.

The response to postal questionnaires in general is poor and an overall return of 53 per cent is comparable with the response rate of a similar study.[10,12] The follow-up telephone call in the current survey increased the response rate by approximately 15 per cent.

Our survey revealed that an average of 63 patients consulted their GPs for the treatment of dizziness during the 12-month period August 2000–July 2001. As the average number of patients in the practices surveyed was 7504, we concluded that eight out of every 1000 individuals would have consulted their GPs on account of dizziness.

There was a wide variation in the number of patients with dizziness seen by individual GPs in two HAs (37 in West Surrey to 83 in Iechyd Morgannwg). The exact reasons for this are difficult to ascertain. It may be due to a variation in the prevalence of dizziness in these HAs and differences in the patterns of consultations. In addition, there may have been a discrepancy between the exact number of patients seen by individual GPs and the number stated in the questionnaire, as the study was carried out retrospectively. The prevalence rate in turn could be related to the age structure of the population and environmental factors.

The survey also showed that the highest prevalence of dizziness occurred in the 60–80-year-old age group. This finding is similar to another study on dizziness in General Practice. Sloane *et al.* (1994) reported that the prevalence of dizziness in a General Practice population was highest in patients over the age of 60 years.[13]

Treatment methods in the current study were compared with the results of three other studies.[8,13,14] There were broadly similar patterns of treatment with only small differences in certain areas. In our study 68.7 per cent of patients in the four HAs were prescribed medication and 13.3 per cent were referred to specialist clinics. Nazareth *et al.*[14] reported that 36 per cent of subjects in their study were prescribed medication and 33 per cent referred to Specialist Clinics.[14] In this context, the

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current study found that 69 per cent of patients were referred to the Ear, Nose and Throat (ENT) Department. However in the study by Bird *et al.*,[8] it was noted that only 36 per cent of patients were referred to this Speciality.[8]

It is interesting to note that in the West Surrey HA, Audiological Medicine was the second most common specialist clinic to which these patients were referred. Audiological Medicine is a relatively new medical speciality in the UK. It deals with various aspects of the management of patients with hearing and balance disorders.[15] At the time of writing, there are 35 specialists (Audiological Physicians) in the UK. The lack of knowledge among GPs (except in West Surrey) regarding the existence of these specialists may account for the difference in referral patterns between GP's in West Surrey and the other HAs surveyed.

Vestibular rehabilitation is very effective in improving balance function in patients with dizziness.[16] In addition, this form of therapy could provide psychological benefits to these patients.[17] In our study only a small percentage of patients (5.8 per cent) were referred for physiotherapy. The reasons for this low referral rate may be a lack of knowledge about the importance of vestibular rehabilitation and lack of availability or access to it. Provision of vestibular rehabilitation in primary care could be very attractive to patients, in addition to being an effective method of treatment.[18] Several GPs in the survey also expressed the need for direct access to vestibular rehabilitation.

Contrary to the popular concept that only patients with peripheral vestibular disorders are likely to benefit from vestibular rehabilitation, it has been shown that this form of treatment is effective in subjects with different pathological lesions. Shepherd *et al*. (1993) showed that three different groups of patients – those with peripheral, central and mixed (peripheral and central) vestibular lesions all derived benefit from vestibular rehabilitation.[19] In a similar study Keim *et al.* (1992) found that there was little difference in the outcomes of subjects with peripheral and central vestibular disorders undergoing vestibular rehabilitation.[20] These authors noted that subjects with different pathological lesions who underwent balance rehabilitation showed a marked improvement in their balance (80–100 per cent). This was based on objective measures (computerized dynamic posturography) as well as observations of the clinicians, patients and their families.

The commonest diagnosis made for a patient with dizziness in this survey was labyrinthitis (40.5 per cent) followed by BPPV (21.1 per cent). These results are similar to those of Sloane *et al.*[13] Results from the National Ambulatory Medical Care Survey in the United States reported that hypertension was the commonest diagnosis in patients with dizziness.[1] However, the authors were of the opinion that this may have been caused by the high prevalence of hypertension resulting in a confounding effect on the diagnosis.

The term 'vertebrobasilar insufficiency' implies that there is an impairment of blood flow in the brain stem. This could result in dizziness due to involvement of balance pathways. In the current study this diagnosis accounted for 7.2–15 per cent (average; 10.8 per cent) of diagnoses (Table IV). It was felt that this was an important cause of 'central' vertigo. There is also evidence that suggests that vertigo may be the only presenting symptom of vertebrobasilar insufficiency (VBI).[21] The questionnaire did not include other causes of 'central' vertigo. However, it is likely that other causes of 'central' vertigo would have been included in the 'unknown' category. None of the GPs who responded stated specific causes of central vertigo such as multiple sclerosis or brain tumours.

The final outcome of the management of patients with dizziness by the GPs in this survey showed that in the majority of cases, there was an improvement (74.9 per cent). No improvement was noted in 11.2 per cent. Although in Iechyd Morgannwg a smaller percentage (63.7 per cent) of patients reported improvement compared with the other HAs, in the former HA there was also a high rate of 'unknown' response (21.7 per cent). The provision of specialist physiotherapy at Primary Care level could further improve a successful outcome in the management of patients with dizziness. Other measures which could also influence this are – shorter waiting times in specialist clinics, appointment of more specialists with an interest in balance disorders (e.g.: Audiological Physicians, Neurologists, Neuro-Otologists), one-stop Dizzy Clinics and the provision of training for GPs in the management of patients with dizziness. Many of these issues were stated by the GPs who participated in the survey. A recent innovation in the management of dizziness is the one-stop Dizzy Clinic which provides all aspects of dizziness management.[22] The provision of facilities such as investigations and Physiotherapy in the same setting has the potential for a good overall outcome and also reduces the need for several out-patient visits. Such a clinic would also reduce the need for inappropriate investigations. It would, therefore, improve the quality of service for patients with dizziness while causing a reduction in the cost of patient care.

In each HA there appears to be a wide variation in treatment methods between individual GPs. This is probably because in Primary Care, the diagnosis of dizziness is mainly based on clinical judgement. The availability of specialist services such as Physiotherapy and the expertise of GPs in this field will also influence the management of these patients. Only small differences were observed in the management methods of GP's between the four HAs. The overall results are comparable to other studies both in the UK and the USA.

Conclusion

Our study showed that the outcomes in the management of patients with dizziness were broadly similar in the four HAs that were surveyed. In the majority

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of cases (74.9 per cent), GPs noticed an improvement while only a small proportion (13.3 per cent) were referred to specialist clinics. It was also felt that the management of these patients at Primary Care level could be improved by the provision of improved facilities such as specialist Physiotherapy services and access to 'one-stop Dizzy Clinics'.

- **This is a paper presenting the results of a postal survey on the treatment of dizziness in General Practice in four Health Authorities**
- **The age of patients at presentation, the incidence of giddiness, the different diagnoses made and the treatment given are presented and discussed**
- **The commonest diagnosis was 'labyrinthitis' and most recovered without referral for specialist investigation**
- **The authors suggest that management might be improved by specialist physiotherapy services and one-stop clinics**

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Dr V. Jayarajan takes responsibility for the integrity of the content of the paper.
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Appendix

1. How many patients are there in your practice? .....

2. How many patients with dizziness have you seen in the past 12 months? .....

3. What age groups were these dizzy patients?

5–20	years	.....%
20–40	years	.....%
40–60	years	.....%
60–80	years	.....%
over 80	years	.....%

4. Please state which of the following you normally use in the management of patients with dizziness – (total percentage may be over 100 as there may be overlap)

1) Medication .....%
2) Counselling .....%
3) Physiotherapy .....%
4) Referral to specialist clinic .....%
5) Any other form of therapy .....%
–Please specify type of therapy .....

5. Which Speciality are you likely to refer patients with dizziness?

1) ENT .....%
2) Neurology .....%
3) Cardiology .....%
4) General Medicine .....%
5) Physiotherapy .....%
6) Other .....%
–Please specify Speciality .....

6. What drugs do you normally use for the treatment of dizziness? (total percentage may be over 100 as there may be overlap)

1) Betahistine (Serc) .....%
2) Prochlorperazine (Buccastem/Stemetil) .....%
3) Cinnarizine (Stugeron) .....%
4) Other drugs .....%
–Please specify drug/s .....

7. What are the common diagnoses made for dizzy patients in your clinical practice prior to referral if required?

1) Labyrinthitis .....%
2) Ménière's disease .....%
3) Benign paroxysmal positional vertigo (BPPV) .....%
4) Vertebrobasilar insufficiency .....%
5) Medical problems (eg. Diabetes mellitus) .....%
6) Diagnosis unknown .....%

8. What was the outcome of the overall treatment of these dizzy patients over the last 12 months?

Much better .....%
Mild improvement .....%
No improvement .....%
Outcome not known .....%

9. Do you think that the service for dizzy patients in your practice could be improved?

YES/NO (please delete as appropriate)

If yes, please state what improvements could be made .....

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