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Outcome of symptoms of dizziness in a general practice community sample

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Background. Dizziness is commonly experienced in the community, but little is known about the long-term progression of the condition.

Objective. We aimed to assess over 18 months the outcome of symptoms of dizziness in a sample of patients identified from London general practices.

Method. We followed up at 18 months a cohort of patients who reported symptoms of dizziness with or without anxiety, panic reactions or avoidance of situations that provoked the symptoms. The subjects completed a structured questionnaire both at baseline and at 18 months.

Results. At 18 months, 24% (95% CI = 23.5–34.8%) were more handicapped and 20% (95% CI = 15.2–25.2%) had recurrent dizziness, while 20% (95% CI = 14.9–24.8%) had improved. Patients with significant dizziness were more likely to consult their GP (OR = 14.4, 95% CI = 7.0–29.1) and were more likely to receive treatment (OR = 7.8, 95% CI = 3.2–22.4) or be referred to hospital (OR = 8.4, 95% CI = 3.2–22.4). The independent predictors of handicapping dizziness at 18 months were a history of fainting (OR = 2.4, 95% CI = 1.2–4.7), vertigo (OR = 2.6, 95% CI = 1.3–5.0) and avoidance of a situation that provoke dizziness (OR = 4.8, 95% CI = 2.5–9.0).

Conclusion. Four per cent of all patients registered with a GP suffer persistent symptoms of dizziness and at least 3% are severely incapacitated by their symptoms. The presence of vertigo, fainting and avoidance in a person with dizziness is predictive of chronic handicapping dizziness. Further research is required on the progressions of symptoms of dizziness in a sample of GP attenders and those in the community.

Keywords. Dizziness, general practice, outcome, working-age people.

Introduction

Symptoms of dizziness are common in the community.[1,2] In the United States, half the population followed up over 3 months in primary care reported health problems, and a third were handicapped by their symptoms.[3] No published data on the progressions of symptoms of dizziness in a British general practice population are available. The aims of this study are hence to follow up a cohort of patients with dizziness identified from London general practice lists over a period of 18 months and to identify independent predictors of chronic and severe handicapping dizziness.

Method

We recruited four North London practices and we sent a brief questionnaire to a random sample of one in three patients between 18–64 years registered with these practices. The questionnaire provided a self-report of symptoms of dizziness, giddiness or unsteadiness; anxiety or tension associated with panic reactions; avoidance of anxiety-provoking situations; the level of handicap on account of symptoms of dizziness as measured through self-report of interference with work, daily activities and leisure (scored from 0–6); age, occupational status and consultations with GPs with dizziness. These data were used to categorize severity of illness based on symptoms experienced in the previous 18 months. Category 1 included asymptomatic or symptomatic

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subjects without handicap, category 2 were those with one or two episodes of symptoms or with slight handicap when dizzy (score of one on the handicap scale) and category 3 included recurrent symptoms and significant handicap (score of two or more on the handicap scale). The development and validation of this questionnaire has been described previously.[4]

Questionnaires were sent to 5326 patients; 2064 responded, 1522 were returned because the addressee had moved and 138 refused to participate. Telephone calls to 615 non-responders with recorded telephone numbers revealed that 364 (59.2%) had moved. A sample of 200 of the remaining non-responders were sent registered letters and 115 (57.5%) had moved. Extrapolating from these figures, the effective response rate was 69%.[4] Of the 2064 subjects, 480 (23.3%) reported dizziness. We contacted these subjects 18 months later between August 1996 and October 1997 and sent a similar questionnaire as baseline (as previously described). In addition, we asked about frequency of symptoms over 18 months, their consultations with GPs, referral to hospital and treatment for dizziness. Non-responders were followed up by a postal questionnaire and telephone call.

Analysis

Factors influencing the severity of illness were identified by univariate analyses using chi-square statistics for proportions. Significant and other relevant factors predictive of severity of illness (such as age, sex, social status and associated physical and psychological symptoms reported at baseline) were entered in a forward stepwise logistic regression equation, to identify independent predictors. The dependent variable was dichotomized to no clinical dizziness (i.e. a combination of categories 1 and 2) and chronic handicapping dizziness (category 3).

Results

Fifty-three of the 480 subjects with dizziness had moved address and could not be traced. Of the remaining 427, 247 (58%) responded to the questionnaire. No difference was found between responders and non-responders on age, social status or the duration and type of symptoms at baseline. There was a trend for responders to self-report a longer duration of dizziness than non-responders, and a significantly higher proportion of the men responded (chi-square = 6.8, $P = 0.01$).

Dizziness

Thirty-seven (15%) had not experienced dizziness during the 18 months, 94 (38.1%) had had symptoms once or twice and 66 (26.7%) had felt dizzy several times. Fifty (20.3%) were dizzy more often (14 subjects at least monthly, 19 weekly and 17 almost daily).

Level of handicap

In total, 114 (46.2%) did not experience any handicap, 97 (39.3%) had a mild handicap, 36 (14.5%) were substantially handicapped. Seventy-two (29%) reported more handicap from symptoms, 18 months later. Of the 97 (39.3%) unemployed at 18 months, 14 (14.3%) gave up work on account of dizziness and of the 150 in employment, 12 (8%) had had 10 days off work in the previous 18 months.

Medical consultations and treatment

Only 60 (22%) had consulted their GP with dizziness in the 18 months; 22 (9%) were prescribed medication; 12 (5%) were counselled; 4 (1.6%) received physiotherapy; and 13 (5.3%) had other treatments. Twenty (8.1%) were referred to hospital: three to neurologists, one to an ENT specialist, three to psychiatrists, seven to cardiologists, two to accident and emergency, and four to a range of hospital specialists.

Severity of symptoms

One hundred and seventy (70%) subjects belonged to category 1, 20 (8%) to category 2 and 54 (22%) to category 3. The relationship between severity and the reporting of specific symptoms at baseline, level of service utilization and relevant demographic variables are reported in Table 1. Those with chronic handicapping

TABLE 1 *Factors associated with chronic handicapping dizziness*

	No problem (%)	Significant problem (%)	Odds ratio	95% CI
Demographic:				
Sex				
male	69 (36)	23 (43)		
female	124 (64)	31 (57)	1.3	0.7–2.5
Social class				
I-IIIN	115 (79)	24 (65)		
IIIM-V	30 (21)	13 (35)	2.1	0.95–4.6
Use of health services:				
Consult GP over 18 months	19 (10)	33 (61)	**14.4**	**7.0–29.2**
Refer to hospital	7 (4)	21 (39)	**8.4**	**3.2–22.4**
Treatment (any type)	18 (9.3)	24 (44.4)	**7.8**	**3.2–22.4**
medication	11 (5.7)	11 (20.4)	**4.2**	**1.7–10.4**
counselling	3 (1.6)	9 (16.7)		
Reported symptoms at baseline:				
Vertigo	48 (24.9)	33 (61.1)	**2.6**	**1.4–4.9**
Giddiness	120 (62.2)	34 (63)	1.03	0.5–1.9
Unsteadiness	47 (24.4)	24 (44.4)	**2.4**	**1.3–4.7**
Anxiety	89 (46)	36 (66.7)	**2.3**	**1.2–4.4**
Avoidance	49 (25.4)	33 (61.1)	**4.6**	**2.5–8.7**

Figures in bold indicate significant results.

TABLE 2 *Predictors of chronic handicapping dizziness at 18 months*

Factors	Odds ratio without adjustment (95% CI)	Odds ratio with adjustment
Increasing age	1.03	excluded
Female subjects	1.33 (0.7–2.5)	excluded
Social classes IIIM–V	2.08 (0.95–4.5)	excluded
Presence of vertigo	2.6 (1.4–4.9)	2.6 (1.3–4.7)
Presence of giddiness	1.03 (0.5–1.9)	excluded
Presence of fainting	2.4 (1.3–4.7)	2.4 (1.2–4.7)
Presence of unsteadiness	2.3 (1.2–4.4)	excluded
Presence of anxiety	3.3 (1.8–6.2)	excluded
Presence of avoidance	4.6 (2.4–8.7)	4.8 (2.5–9.0)

dizziness were significantly more likely to experience vertigo, fainting, unsteadiness, anxiety and exhibited avoidance. They were also more likely to have consulted their GP, have been referred to a hospital specialist and have had treatment (mostly medication).

Predictors of chronic handicapping dizziness

Significant univariate predictors of chronic handicapping dizziness were presence of vertigo, unsteadiness, avoidance and anxiety at baseline. On logistic regression, however, only the presence of vertigo, fainting and avoidance were identified as independent predictors (Table 2).

Discussion

To our knowledge this is the first study to report the progressions of symptoms of dizziness over time in British general practice. One in five people experienced recurrent and frequent dizziness, 15% were substantially disabled by their symptoms and 29% were more handicapped 18 months later. Subjects with persistent dizziness were frequent users of general practice services and were more likely to receive treatment (mostly drugs) and/or be referred to hospital. The independent clinical predictors of handicapping dizziness were a history of fainting, vertigo and avoidance at baseline.

Our previous survey of a working age general population between the ages of 16 and 64 years indicated that at least 20% had symptoms of dizziness. Using the data reported in this paper, at least 4% of all patients between the ages of 18 and 64 years registered with a GP report persistent and frequent symptoms of dizziness, and at least 3% are severely incapacitated by the symptoms, 18 months later. This highlights the chronic nature of the disorder and the need to develop adequate diagnostic measures and effective treatment programmes.[5]

There are limitations to the data presented in this paper. Only 58% of the eligible subjects responded to the questionnaire and hence it is likely that symptomatic subjects were more likely to respond. There were, however, no important demographic or clinical differences between the responder and non-responders. Men were more likely to respond despite the poor response to completing postal questionnaires or attending clinical programmes generally observed amongst this group of subjects. Were male participants more aware of their symptoms on account of their effects on daily function? This aspect needs further investigation.

Despite the widespread prevalence of dizziness in the community, the symptom remains poorly treated. This is particularly so for about 4% of all patients registered with a GP. Patients with dizziness should be routinely asked about symptoms of vertigo, fainting and avoidance of situations that provoke dizziness (such as travelling or being in crowded or open spaces), as these are important prognostic markers. Further research on the long-term prognosis of dizziness in primary care will need to be carried out on general practice attenders and community patient samples to support the results of this study.

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