Use of the Michigan alcoholism screening test in general practice

E. FIONA NICOL, BSc, MRCP, MRCGP
General Practitioner, Edinburgh

M.J. FORD, FRCP(E)
Consultant Physician, Leith Hospital, Edinburgh

SUMMARY. The Michigan alcoholism screening test was used to assess the prevalence of alcohol problems in 142 patients aged between 18 and 60 years consulting a general practitioner. Previous and/or current alcohol problems were identified in 33% of men and 4% of women. Unemployment was found to be significantly associated with alcohol problems in the men of the study group. The higher proportion of patients with alcohol problems requesting consultation compared with those without such problems did not appear to be associated with a specific presenting complaint.

Screening for alcohol problems should be undertaken in all patients consulting a general practitioner if early detection and intervention are to be achieved.

Introduction

EXCESSIVE drinking and alcohol abuse have become an increasing source of medical and social problems in this country.[1] Using a postal questionnaire, excessive alcohol consumption has been identified in 11% of men and 5% of women in the general population.[2] The increased morbidity associated with alcohol abuse is well established; in one accident and emergency department 40% of patients had consumed alcohol before attending and 32% had a blood alcohol concentration exceeding 80 mg per 100 ml.[3] Alcohol-related problems have been found in 19% of acute medical admissions.[4]

Despite recommendations to undertake screening for alcohol problems, general practice has been slow to introduce routine screening which may allow as many as 90% of alcohol abusers to be detected.[5,6] The present study assessed the use of the Michigan alcoholism screening test in identifying the prevalence of alcohol problems in consecutive male and female patients consulting a general practitioner. In addition, psychoneurotic profiles together with details of presenting complaints were recorded for all the patients studied.

Method

The study practice is single-handed and situated in a health centre in Livingston, West Lothian. It was hoped to recruit 100 consecutive female patients and 50 consecutive male patients aged between 18 and 60 years requesting a consultation during the three-month study period. Each patient was approached by the practice receptionist and invited to complete a detailed questionnaire while waiting to see the general practitioner. The questionnaire asked for social and occupational data and included the Michigan alcoholism screening test and the Middlesex Hospital questionnaire. Social classes 1 to 5 were identified using the conventional method of occupational status of the patient, spouse or father.[7]

The Michigan alcoholism screening test is a 24-item questionnaire using a differential weighting of items. Previous or current serious alcohol misuse, lifetime mean daily alcohol consumption and duration of drinking problem correlate closely with total scores of 5 or more. Using the cut-off point of 5 this test will correctly identify approximately 87% of problem drinkers and 87% of non-problem drinkers.[8,9]

The Middlesex Hospital questionnaire (Crown–Crisp experiential index) is designed to produce an objective, reliable and valid approximation to the diagnostic information that can be gained from a formal psychiatric interview.[10] It consists of 48 items which provide six subscales for free-floating anxiety, phobic anxiety, obsessionality, somatic anxiety, depression and hysteria. The scoring of the six subscales (maximum score of 16 for each) results in a total score which reflects the general level of neuroticism.[10]

During the consultation, each completed questionnaire was checked by the general practitioner. The nature of the problem for which the consultation had been requested was recorded and coded using one of 10 separate categories, for example, psychiatric complaint, gastrointestinal complaint or respiratory complaint.

The results were analysed using the Wilcoxon rank sum test, Student's t-test and the chi-square test (using Yates' correction when necessary) as appropriate.

Results

Characteristics of patients

In the practice population of 1129 patients (51% male, 49% female) 632 (56%) were aged between 18 and 60 years. Twenty-two per cent of the practice population were in social classes 1 and 2, 56% in social class 3 and 32% in social classes 4 and 5. During the three-month study period there were 792 consultations; 100 consecutive female patients but only 42 consecutive male patients could be recruited with 10 patients declining to complete the questionnaire. The social class distribution of the study group was not significantly different from that of the total practice population. Within the study group, six (14%) of the men and 15 (15%) of the women's spouses were unemployed.

Michigan alcoholism screening test

Alcohol problems, defined by a cut-off score of 5 on the Michigan alcoholism screening test, were identified in 18 patients — 14 men (33%) and four women (4%). The social class and marital status of patients with and without alcohol problems did not differ significantly. However, all but one of the six unemployed men had an alcohol problem (chi-square = 6.0, $P < 0.05$).

Association with other problems and psychoneurotic profiles

The presenting complaints of patients with and without alcohol problems did not differ significantly; psychiatric complaints, alimentary complaints and locomotor/accident-related complaints comprised 13%, 10% and 13% respectively of the 142 consultations. Analysis of the psychoneurotic profiles of the men using the Middlesex Hospital questionnaire failed to reveal any

significant association with alcohol problems. The number of women with an alcohol problem was too small to justify a similar analysis.

Discussion

A previous survey of all 9763 patients registered with the same health centre reported the prevalence of problem drinkers as 3.3% for men and 0.5% for women by analysis of problem-oriented medical records; the consultation rate of problem drinkers was twice that of controls.[11] The present study, using the Michigan alcoholism screening test, found the prevalence of alcohol problems in patients requesting consultation to be 10 times that previously reported. However, the sample size was small and difficulties were experienced in recruiting men owing to the preponderance of women, frequent attenders and children requesting consultation. The marked disparity in prevalence rates between the two studies may also be partly attributed to the higher consultation rate of those with alcohol problems and the difficulties in excluding the male bias inherent in the 24 items of the Michigan alcoholism screening test. Nonetheless, it seems more likely that the differences found are a true reflection of the greater sensitivity of a screening questionnaire than analysis of medical case records.

No characteristic psychoneurotic profile or particular presenting complaint was associated with alcohol problems. Accident-related, gastrointestinal and psychiatric problems have previously been reported to be more common among problem drinkers than among those without such problems.[11] However, there are undoubtedly more potent factors determining requests for consultation. There is a social dimension to every consultation which influences patients' perception and interpretation of and reaction to their symptoms. The factors which determine whether a patient seeks medical advice include not only the severity of symptoms but also life events, social and cultural factors and experience of previous illness.[12,13] It seems likely that the psychosocial distress associated with alcohol abuse probably accounts for the overrepresentation of patients with alcohol problems consulting the general practitioner. In support of this is the finding that unemployment was significantly associated with alcoholism in the men of the study group.

Although the Michigan alcoholism screening test has not been used extensively in general practice in the UK, its reliability and validity as a screening test are well-proven.[8,9] The use of a cut-off score of 5 correctly identifies 87% of problem drinkers but this wastes potentially useful information. Scores above this level can help identify both the severity of an alcohol problem and the characteristics of different alcohol problems in groups of individuals.[9] Patients with the same score may well have different causes for their alcohol problems and this is indicated by the screening test; the general practitioner can therefore determine both the severity and the principal area of difficulty of the alcohol problem from this test. No screening test is perfect and the Michigan alcoholism screening test is no exception. Since the majority of the questions are retrospective, the test does not necessarily indicate current alcohol problems as high scores can be recorded when there have been previous alcohol problems which have been resolved. Nonetheless the Michigan alcoholism screening test can be of considerable use in directing the attention of the general practitioner to the possible relationship between alcohol abuse and personal and family problems. The rationale for such a screening test is to identify the problem drinker and facilitate early intervention. The next step is to evaluate the effectiveness of intervention and determine the ideal method of helping people with alcohol problems.[14,15]

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Address for correspondence

Dr E.F. Nicol, Stockbridge Health Centre, 1 India Place, Edinburgh.