

Assessment of drinking patterns in general practice

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SUMMARY. A study was undertaken in a north London general practice to see which questions and investigations were useful in assessing the drinking patterns of patients. In a 10-month period in 1984, 855 patients were interviewed by means of a questionnaire about quantity and frequency of drinking and the CAGE questionnaire to determine their drinking habits. They were also asked to blow into an alcolmeter. A blood sample was taken from 119 patients who said they drank more than 20 units of alcohol weekly or who scored more than two on the CAGE questionnaire or who had a positive alcolmeter reading, and gamma glutamyl transpeptidase levels and mean corpuscular volume were determined.

The study showed that questions about quantity and frequency of drinking, taking under two minutes to administer in the consultation, are sufficient to raise suspicions about drinking problems. Detailed investigation can then be undertaken in patients who say they drink more than 20 units of alcohol weekly.

Introduction

A GENERAL practitioner with 1800–1900 adult patients in his practice will have approximately 10 patients who are alcohol dependent, 40 problem drinkers and 100 heavy drinkers.¹ He or she is particularly well-placed to provide advice to heavy drinkers at a stage where it is effective in preventing a dependency which may well become a major health hazard.²⁻⁴

The aim of the present study was to explore which questions and tests are useful in general practice for assessing the drinking habits of patients with a view to advising them on measures for altering their drinking.

Method

The sample was drawn from all patients over the age of 15 years attending four doctors in a group practice in Islington, north London. Every second patient was asked at the end of the consultation to participate in a survey of drinking habits, and was directed to a part-time research worker, an experienced nurse, in an adjoining room. She was present over a 10-month period in 1984, attending a proportionally equal number of morning and evening surgeries for each of the four doctors.

The research worker asked a series of questions from a prestructured questionnaire, which consisted of basic demographic information and four questions about quantity and frequency of drinking alcohol: (1) how often the patient drinks, (2) how many drinks he has on a day when he drinks, (3) how many drinks per week and (4) how often he has any of the following on a day: seven pints of beer or cider, two bottles of

wine, one bottle of sherry, port or martini (or their equivalent).⁵ Patients were also asked the four 'CAGE' questions: (1) Have you ever felt that you should cut down your drinking? (2) Have you ever been annoyed by criticism of your drinking? (3) Have you ever felt guilty about your drinking? (4) Do you drink in the morning? (eye opener).⁶ The nurse then asked them to blow into an alcolmeter⁷ to measure their blood alcohol levels by breath analysis. The alcolmeter measures ethanol concentration in the volumetrically trapped breath sample of alveolar air by an electrochemical oxidation process. Weekly checks on calibration were performed.

Patients were classified according to whether they reported drinking less than 20 units, 20–27 units, 28–55 units or more than 56 units of alcohol per week. One unit is approximately one glass of wine or sherry, half a pint of beer or cider or one public house measure of spirit. A deliberately low threshold of weekly consumption was chosen to maximize the number of patients who would be investigated in more detail.

Any patient drinking more than 20 units of alcohol per week, or answering positively to two or more CAGE questions, or having a positive alcolmeter reading was requested by the nurse to provide a blood sample. The mean corpuscular volume (normal range 84 ± 7 fl) and gamma glutamyl transpeptidase levels (normal range less than 65 IU l^{-1}) were determined. One hundred and nineteen patients fulfilled the above criteria, and none refused to be tested.

Control blood samples were taken from the next available 119 patients drinking less than 20 units of alcohol weekly. It was not always possible to sample the next consecutive 'negative' patients because of pressures during surgery and the risk of missing 'positive' patients if they were kept waiting.

All patients with a drinking problem were invited to attend for follow-up. Their drinking habits, method of detection and medical records were analysed. A drinking problem was defined as repeated drinking causing dependency and/or physical, psychological, social or economic harm to an individual and/or others. A hidden or potential drinking problem was suggested by general medical status and/or biochemical abnormalities. A controlled problem was based on a past history of problem drinking.

Results

A total of 855 patients agreed to participate in the survey and two declined. One hundred and nineteen patients (13.9%) were 'positive' on one or more of the criteria for problem drinking — 96 were 'positive' on the quantity questionnaire (80.7%), 52 on the CAGE questionnaire (43.7%) and eight (6.7%) on the alcolmeter (Table 1). There were 89 (75%) men and 30 (25%) women, with ages ranging between 17 and 80 years (mean 38.1

Table 1. Number of patients with a drinking problem detected by the quantity and frequency questionnaire, the CAGE questionnaire or the alcolmeter (total number of patients = 119).

Drinking problem detected by:	Units of alcohol per week ^a				Total
	<20	20–27	28–55	56+	
Quantity questionnaire	N/A	30	51	15	96
CAGE questionnaire	20	12	11	9	52
Alcolmeter	3	3	2	0	8

N/A = not applicable. ^a Unit of alcohol is one glass of wine or sherry, half a pint of beer or cider or one public house measure of spirit.

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Table 2. Number of patients with a drinking problem identified by the different methods, according to the doctor's assessment of the extent of the problem.

Drinking problem detected by:	Drinking problem	Hidden or potential problem	Controlled problem	No problem	Not known ^a	Total
Alcometer alone	0	1	0	2	0	3
CAGE questionnaire alone	0	5	11	4	0	20
Quantity questionnaire						
20–27 units ^b	0	11	0	19	0	30
28–55 units	4	12	0	27	8	51
56+ units	8	5	0	0	2	15
Total	12	34	11	52	10	119

^a Refers to patients who moved away or failed follow-up. ^b Number of units of alcohol reported to be drunk per week by the patient.

years). Sixty-four of the 'controls' (53.8%) were men and 55 (46.2%) were women, with ages ranging between 15 and 79 years (mean 35.9 years).

Of the 119 patients who fulfilled the chosen criteria 96 (81%) were identified by considering the quantity questionnaire then 20 (16%) by considering the CAGE questionnaire alone and finally three (3%) by considering the alcometer alone. Of the 20 patients who reported drinking less than 20 units of alcohol but were positive on the CAGE questionnaire, 11 were known to have a history of heavy drinking or alcohol abuse, five were thought to be reporting their consumption inaccurately, and four, who were drinking at a safe level, were aware of the consequences of heavy drinking. Only three patients who were negative on both questionnaires had a positive alcometer reading; two had been celebrating a birthday and one was thought to have an alcohol problem which was not being reported.

Table 2 shows the relationship between the results for the different methods of detecting a drinking problem and the assessment of the extent of the problem. Setting the threshold for the quantitative questionnaire at the low level of 20 units of alcohol per week appeared to be a worthwhile exercise as many of these patients showed medical or biochemical evidence of a hidden or potential drinking problem. Eleven of the 30 patients admitting to 20–27 units weekly were assessed as having a possible or potential problem. Twelve patients who reported drinking over 28 units of alcohol per week were assessed as having a drinking problem. All these patients were given advice on reducing alcohol intake.

Forty patients out of 238 had a mean corpuscular volume greater than 95 fl; 29 of them were 'positive' and 11 were 'controls'. Six results were mislaid. Thirteen of the 238 patients had a gamma glutamyl transpeptidase level greater than 65 IU l⁻¹; nine of them were 'positive' and four were 'controls'. There were four missing results. Not all the abnormal results could definitely be attributed to alcohol but in the 'control' group three of the raised mean corpuscular volume readings and three of the four raised gamma glutamyl transpeptidase levels were thought to be due to alcohol excess.

Discussion

The study was undertaken with the constraints of a busy general practice in mind, acknowledging the limitation on time for consultation and the large number of patients attending in routine surgery hours. Although in this project a research worker undertook the interviews the questions could have been asked by the general practitioner within the same time. The aim of the study was to determine the best way of assessing a patient's drinking practice. Asking the right questions when interviewing the patient appeared more profitable in time than testing the breath for alcohol or analysing blood for mean corpuscular volume and gamma glutamyl transpeptidase levels.

Questions about frequency and quantity of alcohol intake obtained, in approximately one minute, enough information to raise a suspicion about possible drinking problems. This supports another study in this area on the usefulness of questionnaires in the recognition of drinking problems.⁸ If necessary, further

detailed questions could then be asked and blood tests undertaken. The CAGE questionnaire was found to be mainly useful for recognizing patients who already had drink problems and were now abstinent. The results from the alcometer were less useful than in a previous study.⁷ Further investigation using this method of detection would be of interest.

One-third of the patients admitting to drinking 20–27 units of alcohol weekly were thought to have a hidden or potential drinking problem and were given general advice on the need to reduce alcohol intake. They were told to reduce the rate and volume of alcohol consumed in social situations, for example to drink half pints of beer as opposed to pints, single measures of spirits and not doubles and not to drink with every round. The importance of drink-free days in a given week and being aware of the quantity of alcohol drunk were stressed. This seemed a worthwhile investment in consultation time, taking two to three minutes, and demonstrates how intervention can usefully be undertaken at a primary care level, though long-term follow-up is necessary to substantiate its benefit.

In the group consuming 28–55 units a week similar points could be made, although a small number might have to aim for abstinence.

Likewise, with amounts of alcohol greater than 56 units a week, abstinence is necessary, at least temporarily, pending further investigation. Providing the patient is motivated and there are local support services available then treatment in general practice can be contemplated.

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