

LEADER

The detection of alcohol misuse in accident and emergency departments – grasping the opportunity

Nearly 10 years ago the Department of Health held a conference on education about alcohol and its misuse.¹ Half a dozen doctors, including a consultant in accident and emergency (A&E) medicine, were invited to give their views: without exception they expressed dissatisfaction with training, both as undergraduates and postgraduates, as a result of which they felt ill equipped to deal with alcohol problems in their practice. Things have improved since then, but there are still areas of ignorance and misunderstanding which should be addressed if a common problem is to be properly managed.

It is not always appreciated that alcohol misuse is a frequent accompaniment of many types of illness, and may be encountered by *all* doctors whatever their specialty²; it is not just an occasional problem for the physician or psychiatrist. Surgeons, for example, may be faced with conditions ranging from undiagnosed abdominal pain to confusion in the elderly after trauma or operation. Orthopaedic surgeons may not realise how often alcohol misuse plays a part in accidents, especially in young men, and thus miss the opportunity to give advice about drinking at a time when the patient is most receptive. A recent neurosurgical study³ reported that 50% of adult admissions for head injury were overtly intoxicated, and no doubt alcohol played a part in other patients. Gynaecologists should be aware that menstrual irregularities and infertility can be associated with excessive drinking, and ear, nose and throat surgeons that alcohol misuse may be a factor in nose bleeds.⁴

A&E consultants are only too familiar with the disruption and violence caused by the intoxicated patient and with the involvement of alcohol in serious conditions such as major trauma and self poisoning, but may be less accustomed to spotting the more subtle effects of alcohol misuse. Like others in the acute specialties, they must concentrate on the presenting illness; time and training seldom allow for detailed analysis of underlying causes. What is more, the stereotype of the “alcoholic”, with largely irreversible diseases like cirrhosis and pancreatitis or repeated attendances for withdrawal symptoms and accidents, perpetuates the belief that little can be done. The result is that the many social, psychological, and physical hazards of heavy drinking, which are potentially treatable, are not recognised.

What is the problem?

In Britain with a population of 56 million, over 90% of people drink alcohol. Some eight million, however, including children as young as 12 or 13, drink more than generally accepted sensible or “low risk” amounts of alcohol. These levels were established by consensus in the 1980s at approximately 21 units a week for men and 14 units a week for women (1 unit is equivalent to half a pint of average strength beer, or a small glass of wine, sherry, or spirits). Unfortunately the Department of Health has recently con-

fused the issue by changing the goalposts so that men are now “allowed” to drink up to 4 units a day and women up to 3 units a day.⁵ This seems to be part of a government led liberalisation of drinking, supported, naturally, by the drinks industry and media: opening hours have been extended, advertising relaxed, especially of spirits, younger drinkers targeted, and import of alcohol for personal use greatly extended, all this being justified by the scientific evidence that moderate drinking prevents coronary heart disease. So far, relaxation of opening hours has not led to more problems,⁶ but the Ledermann hypothesis⁷ suggests that the more alcohol a population consumes the greater the proportion of heavy drinkers, so present government policy should be monitored to see if harm increases.

People defined as misusing alcohol can be divided into *heavy drinkers* if they remain unaffected, *problem drinkers* if they suffer socioeconomic, physical, psychological, or legal problems, and *dependent* if they are addicted to alcohol. The World Health Organisation (WHO) suggests two definitions: “hazardous” drinking — the *risk* of physical or psychological harm — which is likely in men consuming, say, 29–49 units alcohol a week and in women 22–35 units a week, and “harmful” drinking — the *presence* of physical or psychological complications — at amounts greater than these.⁸ It is the heavy or hazardous drinker who particularly needs to be detected because of the potential for successful intervention.

Detecting alcohol misuse

The aim must be to identify unsuspected alcohol misuse as well as those clearly under the influence. The first priority should therefore be to ask every patient from about the age of 10 for details of the quantity and frequency of their drinking. This should include a question about binge drinking—the consumption on one or more occasions of at least 10 units in men and at least 7 units in women—which is particularly common in young adults. Obviously questioning is impractical in some patients, and complete coverage may be impossible under the conditions in which many doctors work. Nevertheless it is perfectly possible to obtain a drinking history within two minutes in general practice⁹ and A&E departments,¹⁰ and now in one minute in a busy A&E unit at St Mary’s Hospital with the Paddington alcohol test (PAT) described in this issue (page 308).

It is depressing to read in a paper published last year, optimistically entitled “Education and audit can improve the identification of excessive drinkers among medical inpatients”,¹¹ that only 48% of medical notes contained quantitative information about alcohol, even after doctors had received training. The position seems no better in the United States, where almost half the beds in trauma units are occupied by people in whom alcohol is associated with their injury. Although screening for alcohol is considered desirable, a survey in 1988 found that this was not done in

71% of units, while a follow up in 1994 reported "lack of standardised alcohol screening" in 95%.¹²

The most common reason given for lack of screening was that alcohol misuse was of "little clinical importance". This is unacceptable, just as are excuses such as lack of time or that patients are economical with the truth about their drinking; drinking histories in A&E patients have been validated as generally accurate.¹³

It has been standard practice in A&E departments both in Britain¹⁴⁻¹⁷ and abroad¹³ to measure the blood alcohol concentration (BAC), usually by means of a breathalyser. In her contribution to a collection of papers in *Addiction* devoted to alcohol and injuries, Cherpitel¹³ reviewed international reports of BAC use in A&E and concluded, as have others,^{16, 17} that it is not a reliable guide on its own, especially in habitual heavy drinkers: "a substantial subset of sober patients [in trauma units] are alcoholics".¹⁸ It is worth bearing in mind, too, that BAC depends crucially on the time lapse between drinking and attendance at hospital. If a patient is obviously intoxicated testing is unnecessary, unless for legal reasons.

Questionnaires like the Brief Michigan Alcoholism Screening Test (Brief MAST) and CAGE are also popular. The first consists of 10 questions about the effects of drinking; the second is derived from the initial letters of the key elements in each of the four questions: desire to *cut down* on consumption, *annoyance* at criticism of drinking, *guilt*, and need for a drink first thing (*eye opener*). Both detect problem and dependent drinkers; they are unlikely to be helpful in hazardous drinkers who could benefit most from intervention. Recently WHO has developed and validated an alcohol use disorders identification test (AUDIT) which has 10 questions designed to embrace all types of heavy drinking.⁹ The fact remains that the time taken to complete questionnaires, even when self administered, cannot justify their routine use in a busy department like A&E, though they may of course be valuable as a research tool.

The same strictures apply to blood tests like γ glutamyl transferase (GGT) and mean corpuscular volume (MCV). While up to two thirds of individuals already harmed by their drinking have raised values, the figure falls to only 20-25% among patients screened for alcohol misuse in general practice (Professor Andrew Haines, personal communication).

Tackling the problem in A&E departments

A conservative estimate is that 10 000 attenders a year at each A&E department have alcohol related problems,¹⁹ so the potential for detection is considerable. The importance of encompassing the spectrum of heavy drinking has been emphasised; it is not enough to identify only the intoxicated, the already damaged, and the dependent. Such a wider remit would provide valuable epidemiological information about the numbers of drinkers in different categories, the types of injury and illness that are likely to be associated with alcohol misuse, and the many determinants of alcohol use by a particular population.

For example, Cherpitel¹³ found that 10-34% of injuries seen in A&E were associated with a positive BAC in reports from different countries. She listed some of the factors that account for variations in prevalence: drinking culture, youth, the amount of unemployment, situation of the hospital, numbers who refuse or are too ill to be tested, and the type and severity of injury. Road traffic accidents, pedestrian injuries (43% positive), assaults, and falls (53% positive) were more likely to be alcohol related than occupational accidents and sports injuries. The frequency of alcohol misuse in non-injured patients ranged from 3% to 19% which underlines its importance in other medical conditions.

A significant variable is the time at which patients attend A&E departments. An early Scottish study,¹⁴ for example, found that 40% of 702 consecutive patients seen between 1700 and 0600 hours had positive BACs, a third of which exceeded 80 mg/100 ml. Daytime prevalence in England is more likely to be around 20%.¹⁶ In North America patients attend A&E departments with cardiac irregularities due to bouts of heavy drinking so often at weekends that the condition has been called "holiday heart".²⁰

If only a small proportion of individuals attending A&E departments because of alcohol misuse were persuaded to moderate their drinking, the impact on the public health would be substantial. The team at St Mary's Hospital (page 308) have shown convincingly that, after training, doctors and nurses in a busy department can use the PAT effectively to detect alcohol misuse, especially if they bear in mind certain clinical pointers, which are given at the beginning of the questionnaire. There is no need for additional tests.

Detection is of little use unless it is accompanied by some form of intervention. How can this be achieved? A&E departments should display information about alcohol and where to find help. Ideally staff should be able to advise affected individuals at the time, but may have to provide a printed advice card²¹ or refer patients to their general practitioner or to a local voluntary agency or specialist unit. A more effective solution, as Smith *et al* (page 308) clearly demonstrate, is to employ a trained alcohol worker, an idea that is being increasingly taken up in both hospital and general practice. This has a number of advantages: immediate engagement with the patient; provision of brief intervention, a technique of proven value for hazardous drinking which takes little time and is cheap²²; liaison with voluntary agencies or specialist unit for management of more severely affected patients; and provision of support and expertise to the A&E team.

Conclusion

The work of Smith *et al* published in this issue shows that the large problem of alcohol misuse can be tackled in an A&E department by using a simple questionnaire based on the alcohol history, carefully designed to identify those at risk. Shifting the emphasis from the already damaged drinker to the earlier stage of hazardous drinking creates opportunities for effective treatment. Detection and management of alcohol misuse in A&E can be greatly facilitated by the employment of a qualified alcohol worker.

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FEATURED RESEARCH

Detection of alcohol misusing patients in accident and emergency departments: the Paddington alcohol test (PAT)

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Abstract

Objective—To develop an effective but practical screening questionnaire for use by accident and emergency (A&E) staff to detect alcohol misuse early on in its natural history, without unreasonably prolonging patient waiting times; and to integrate an alcohol health worker (AHW) into A&E to provide counselling for referred patients.

Methods—Two pilot studies for adult patients were undertaken to develop the 1 min Paddington alcohol test (PAT), which has only three compulsory questions for detecting alcohol misuse: two cover peak consumption and frequency of possible binge drinking, and the third asks whether in the patients' view their attendance at A&E was alcohol related. The use of the PAT was validated in "appropriate" adult patients over a one year period. Patients found to be positive were invited to attend the A&E review clinic for counselling by the AHW.

Results—The development of the PAT resulted in a referral rate of one patient per 158 A&E adult attenders, facilitating a counselling rate of one patient per 263 A&E adult attenders by the AHW. This counselling rate is a 10-fold increase on the rate of one patient per 2610 adult attenders found in a study undertaken during 1988-90.

Conclusions—The use of the PAT is one practical method for A&E staff to detect the alcohol misusing patient for referral to a departmental alcohol health worker.

(*J Accid Emerg Med* 1996;13:308-312)

Key terms: accident and emergency; alcohol misuse; alcohol health worker; Paddington alcohol test

The mortality and morbidity from alcohol misuse, with the resulting social and financial cost to society, have been well documented.^{1,2} The relative cheapness of alcohol because of fiscal policies of postwar United Kingdom governments serves only to exacerbate the problems,^{3,4} as does conflicting advice from the Department of Health.⁵ This advice has now been clarified by the Chief Medical Officer, and for *safe regular* consumption the limits remain 21 units per week for men and 14 units per week for women.⁶

Brief interventions with less severely affected misusers of alcohol are worthwhile.⁷⁻⁹ This is especially true for patients who have yet to develop physical problems. Overall the effect of brief interventions is estimated to be a 24% reduction in alcohol consumption.¹ We have previously shown¹⁰ that almost half of those patients identified initially in accident and emergency (A&E) as having an alcohol problem kept an appointment to be screened in a review clinic and, if appropriate, to be given a "same week" appointment with a psychiatrist (table 1). This suggested that A&E departments are an appropriate place for detection and referral, and helped facilitate the creation of the post of an alcohol health worker-AHW.¹¹

In our original work we used a combination of the brief Michigan alcoholism screening test (MAST)¹² and the CAGE questionnaire,¹³ since questioning patients is the most effective method of screening for alcohol misuse.^{8,14} However, neither of these questions daily alco-

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Accepted for publication
10 July 1996