

Dealing with alcohol abuse in general practice

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Abstract

The excessive use of alcohol is a significant problem in South Africa. The consequences are far-reaching, both for the health of the individual, and for society as a whole. This article examines the role of the family physician in the identification and management of patients with alcohol-use disorders.

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S Afr Fam Pract 2012;54(1):37-41

Introduction

The social use of alcohol as a drug is common in many societies, and has a proud history, stretching back for millennia. There is a well developed culture surrounding the production and consumption of alcoholic beverages, and they form part of the fabric of society. Alcohol is often an integral part of celebrations, meals, and religious rituals, and frequently forms the hub of social interactions.

Epidemiology

The extensive and acceptable use of alcohol in a social context makes alcohol-use disorders particularly difficult to identify and treat.

Alcohol-use disorders are common, but patterns of drinking vary greatly between societies.¹ In the developing world, the predominant pattern of drinking is infrequent heavy drinking, particularly by men.¹ In a review of the prevalence data from national surveys carried out in South Africa, Peltzer and Ramlagan¹ found that lifetime, current use, and binge drinking, remained similar over the years. Binge drinking was 7-11%, and risky drinking, 6%. South Africa appears to have one of the highest levels of alcohol consumption per drinker anywhere in the world. Up to a third of drinkers in this country drink at risky levels over weekends, and it is common for them to drink to intoxication.¹ Thirty to 50% of people who drank in the past year, experienced at least one alcohol-related problem, such as missing work or having interpersonal problems. The lifetime risk for alcohol-use disorders is more than 20% for men, 15% for alcohol abuse, and 10% for alcohol dependence.² In the USA, an epidemiological study showed that one in six patients in community-based primary care practices had problems with drinking.³

Alcohol-use disorders are responsible for a large proportion of the health-care burden in many countries.² The World

Health Organization estimates that alcohol abuse is responsible for two million deaths a year, and four per cent of the global burden of disease.⁴

Pathophysiology

Alcohol affects virtually every organ system in the body.^{2,3} Alcohol abuse is associated with a myriad of physical illnesses, including cirrhosis and other hepatic diseases, cardiomyopathy, pancreatitis, gastrointestinal bleeding, various cancers (ear, nose and throat, oesophagus, and liver),³ encephalopathies, dementia, neuropathies, decreased bone density, depression, suicide and homicide.³

Alcohol-related traumatic injuries, as a result of violence and motor vehicle accidents, are common in South Africa.¹ The levels of foetal alcohol syndrome are the highest ever recorded.¹ Studies show very strong links between drinking and the engagement in risky sexual behaviours, increasing the risk of human immunodeficiency virus (HIV) infection. At a large infectious disease clinic in Cape Town, one in five HIV studied patients met the criteria for an alcohol-use disorder.¹

On the positive side, it appears that moderate drinking, i.e. two to three drinks a day, reduces the risk of cardiovascular disease by 30%.³

Alcohol influences several neurotransmitter systems, including opiate receptors, γ -aminobutyric acid (GABA), glutamate, serotonin and dopamine. The increase in opiate levels may explain the euphoric effect of alcohol, while its effects on GABA give it anxiolytic and sedative properties, and induce muscle relaxation and the feeling of intoxication. Alcohol inhibits glutamate receptors, and long-term ingestion results in the synthesis of glutamate receptors leading to CNS excitability when alcohol is withdrawn.^{2,3} The effects on dopamine in the ventral tegmental area may contribute to the rewarding effect of drinking, and the

craving, as well as behavioural disinhibition during drinking.²

Patients often present with complaints such as malaise, insomnia, anxiety, depression, or a range of medical complaints.² Primary care physicians are ideally placed to identify patients with problematic alcohol use early, and to encourage interventions. These interventions are aimed at reducing alcohol intake, or at abstinence, and include psychosocial interventions, either alone, or in conjunction, with pharmacological treatment.

Screening for unhealthy drinking

A standard drink is defined as 8 g of ethanol in the UK, and 10 g in the USA.² This translates into approximately a can of beer, a single tot of spirits, a glass of wine, or a wine cooler.

Physicians should screen patients for unhealthy drinking if they drink more than three or four standard drinks a day.² The level of screening depends on the patient, and the time available. However, some level of screening should be used on all patients. The following questions are based on National Institute on Alcohol Abuse and Alcoholism (NIAAA) recommendations.⁵

Level 1 screening

A single question has been shown to identify those patients who are at risk, and can be used with all patients, particularly when there are time constraints. This question is: "On any one occasion, during the past three months, have you had more than five drinks containing alcohol?"

Level 2 screening

"On average, on how many days per week do you drink alcohol?"

"On a typical day, when you drink, how many drinks do you have?"

"What is the maximum number of drinks you had on any given day in the past month?"

A brief intervention should be made regarding patients who report binge drinking, male patients who drink more than 14 drinks a week, and female patients who have more than seven.

Level 3 screening

If Level 2 identifies the patient as being at risk, or if the physician suspects that the patient may be downplaying his alcohol consumption, further questioning may reveal the extent of the problem.

The 10-question alcohol use disorders identification test (AUDIT)⁶ has been shown to be an accurate screening method in a variety of populations.

Scoring the alcohol-use disorders identification unit

Scores for each question range from 0-4, with the first response for each question, e.g. "never" scoring 0, the second, e.g. "less than monthly" scoring 1, the third, e.g. "monthly" scoring 2, the fourth, e.g. "weekly" scoring 3, and

Alcohol use disorders identification test questionnaire: screen for alcohol misuse

1. How often do you have a drink containing alcohol?
Never
Monthly or less
2-4 times a month
2-3 times a week
4 or more times a week.
2. How many standard drinks containing alcohol do you have on a typical day when drinking?
1 or 2
3 or 4
5 or 6
10 or more.
3. How often do you have six or more drinks on one occasion?
Never
Less than monthly
Monthly
Weekly
Daily, or almost daily.
4. During the past year, how often have you found that you were not able to stop drinking once you had started?
Never
Less than monthly
Monthly
Weekly
Daily, or almost daily.
5. During the past year, how often have you failed to do what was normally expected of you because of drinking?
Never
Less than monthly
Monthly
Weekly
Daily, or almost daily.
6. During the past year, how often have you needed a drink in the morning to get yourself going after a heavy drinking session?
Never
Less than monthly
Monthly
Weekly
Daily, or almost daily.
7. During the past year, how often have you had a feeling of guilt or remorse after drinking?
Never
Less than monthly
Monthly
Weekly
Daily, or almost daily.
8. During the past year, have you been unable to remember what happened the night before because you had been drinking?
Never
Less than monthly
Monthly
Weekly
Daily, or almost daily.
9. Have you or someone else been injured as a result of your drinking?
No
Yes, but not in the past year
Yes, during the past year.
10. Has a relative or friend, doctor or other health worker been concerned about your drinking or suggested you cut down?
No
Yes, but not in the past year
Yes, during the past year.

the last response, e.g. “daily” or “almost daily” scoring 4. For questions 9 and 10, which only have three responses, the scoring is 0, 2 and 4.

A score of 8 or more is associated with harmful or hazardous drinking, a score of 13 or more in women, and 15 or more in men, is likely to indicate alcohol dependence.

Other useful screening questionnaires

CAGE Questionnaire⁷

- C: Have you ever felt you ought to cut down on your drinking?
- A: Have people annoyed you by criticising your drinking?
- G: Have you ever felt bad or guilty about your drinking?
- E: Have you ever had a drink first thing in the morning to steady your nerves or get rid of a hangover? (eye opener)

RAFFT questionnaire for adolescents

- R: Do you drink to relax?
- A: Do you ever drink while you are alone?
- F: Do any of your closest friends drink?
- F: Does a close family member have a problem with alcohol?
- T: Have you been in trouble from drinking?

Two, or more, affirmative answers may indicate a problem with drinking.

Other worrying symptoms that should alert the physician to the possibility of harmful drinking include an inability to limit drinking after the first one or two drinks, amnesia for events during the period of drinking, neglect of work, social or recreational activities and an increased tolerance for alcohol.

There is a very close interaction between other psychiatric disorders and alcohol-use disorders. Many patients begin drinking in an attempt to medicate the symptoms of depression or anxiety. However, repeated heavy drinking is associated with a 40% risk of depressive episodes associated with suicidal ideation and suicide attempts, insomnia, and severe anxiety.²

It becomes extremely difficult to assess the underlying psychopathology in patients who are drinking heavily. Many patients improve within two to four weeks of abstinence, and it is advisable to assess the psychiatric co-morbidity after a period of abstinence.

Blood tests

Markers can help identify patients at risk and may be used to monitor recovery. They may be useful if the history is in doubt. If positive, they generally indicate high levels of alcohol intake.²

γ glutamyl transferase

Units of over 35 units per litre indicate the probability of heavy drinking. The sensitivity and specificity are close to 60%.²

Carbohydrate-deficient transferrin

Results of over 20 units per litre indicate heavy drinking. The specificity is high, in the region of 90%, although the sensitivity has been reported between 30-60%, depending on the study.²

Very high blood alcohol levels

Very high blood alcohol levels should alert the physician to the possibility of alcohol dependence.

Genetic factors

A strong family history of alcohol-related disorders indicates a vulnerability to alcohol-use disorders. About 40-60% of the risk is explained by genetic factors, and the rest is a combination of genetic factors and the environment.²

Personality characteristics associated with risk-taking, impulsivity, sensation-seeking and disinhibition, are associated with alcohol-use disorders.

Management

Many patients with alcohol-use disorders do well after treatment. A better outcome is associated with less severe alcohol problems, more confidence about the outcome, fewer psychiatric co-morbidities and more intense treatment.²

Once a clinician has identified that there is a problem with alcohol, the use of brief interventions can be very effective in helping the patient reduce or discontinue alcohol.

Patients with severe disorders or multiple relapses should be referred to a specialist facility.

Patients may deny the problem, or feel guilty about their drinking, and the impact of their behaviour. The physician should take a firm, but empathic approach, and should not increase the patient's guilt by blaming or castigating him.

Patients frequently enter a cycle of guilt, and use alcohol to deal with this emotion. They are then faced with further guilt, and drink again in response. Patients should be assisted to break this cycle.

Alcohol abuse is a chronic disease, and relapse is part of the condition. Patients should be encouraged to seek help immediately, and not to regard a relapse as a sign that they have failed and let everyone down, as this attitude leads them back into a cycle of drinking and guilt.

The intervention by the physician includes motivational interviewing and brief interventions.

Motivational interviewing is summarised in the acronym, FRAMES:

- F: Feedback on the patient's risk
- R: Encourage patients to take responsibility for change
- A: Offer advice
- M: Give a menu of options
- E: Interact with empathy
- S: Enhance self-efficacy.²

A brief intervention protocol has been developed by the NIAAA, and includes four components, namely ask about alcohol use, assess, advise and assist.⁴ This includes direct feedback about the physician's concerns, discussions about the impact on the patient's health, setting of goals, behavioural modification strategies, direction to self-help resources, and follow-up and reinforcement.⁷

Traditionally, the goal of treatment has been abstinence from alcohol. However, there are some studies that support the idea that certain patients may be able to return to controlled drinking. This may be seen as an achievable goal, and is regarded as more compassionate and pragmatic. It may be more realistic for patients with at-risk drinking, rather than those with alcohol dependence.⁴

Alcoholics Anonymous and other support programmes have been shown to be extremely cost-effective, and this option should be explored with the patient.

Medication

About 50% of alcohol-dependent patients develop clinically relevant symptoms of withdrawal, beginning about eight hours after a decrease in blood alcohol concentrations, which peak after two days, and subside by the fourth or fifth day.² A full discussion of the treatment of detoxification is beyond the scope of this article, but the management involves thiamine supplementation and short-term use of benzodiazepines.

Naltrexone

Naltrexone is an opioid antagonist, and decreases drinking by diminishing craving, and feelings of reward or pleasure associated with drinking. The dose is 50-100 mg a day, and studies indicate that outcomes are improved by 20% when measured by time to relapse and lowered alcohol intake.²

Acamprosate

Acamprosate inhibits the N-methyl-D-aspartate (NMDA) glutamate receptor hyperactivity that occurs during withdrawal. It increases the time to relapse, decreases the number of drinks on drinking days, and helps maintain abstinence.²

Disulfiram

Disulfiram inhibits aldehyde dehydrogenase (ALDH2). This results in an increase in acetaldehyde after drinking, and the patient experiences nausea, vomiting, diarrhoea, palpitations, and changes in blood pressure. It takes several weeks after discontinuation of the drug, for the ALDH2 to return to normal. After taking disulfiram, there is a potentially severe reaction to alcohol. This means that it should be used with caution.² Ironically, it is most effective as a deterrent when its pharmacological properties are not put to the test. Generally, patients who are likely to test out the effects are not suitable candidates for this treatment.

Nalmefene

Nalmefene is a new compound which will be available in Europe this year. Preliminary results from a Phase III clinical trial of nalmefene in individuals with alcohol addiction have shown that this opioid receptor antagonist reduces alcohol consumption. Patients could take nalmefene as, and when, needed, and the effect is a reduction in harmful drinking.

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