

ALCOHOL-RELATED HOSPITALISATION IN SINGAPORE

E H Kua

SYNOPSIS

This is a study of those patients who were admitted to a general hospital because of alcohol-related problems. There were 62 patients with 39 men and 23 women. The common reasons for admission were attempted suicide in women, and physical illness and drunken behaviour in men. The men were older and more severely dependent as measured on the Severity of Alcohol Dependence Questionnaire (SADQ).

The patients who presented with only psychological and social disabilities were younger and mostly Chinese. Alcohol dependence syndrome was more commonly seen in the Indians. The common physical disabilities noted were poor nutritional status, gastritis and peptic ulcer, liver diseases and peripheral neuropathy. The common psychological and social disabilities included depression, sexual problems, relationship conflict and work problems.

INTRODUCTION

Recently there has been an increasing awareness in Singapore about the hazards of excessive drinking. When does drinking become a problem, or what is an alcoholic or alcoholism? The term "alcoholic" has a pejorative connotation implying a morally bad person and doctors themselves are not too sure what it means. The World Health Organisation uses the term "alcoholism" to include all types of harmful drinking but it is unsatisfactory because it has several different definitions. Two terms which are more specific and now in common use are alcohol dependence syndrome and alcohol-related disabilities.

Department of Psychological Medicine
National University of Singapore
Singapore 0511

E H Kua, MBBS, MRC Psych
Senior Lecturer

The alcohol dependence syndrome was first described by Edwards and Gross (1), and comprised the following criteria:

1. Narrowing of the drinking repertoire
The ordinary drinker can vary his intake from day to day, but the dependent person drinks at regular intervals to avoid withdrawal symptoms.
2. Drinking takes priority over other aspects his life, including health, family, home, career and social life.
3. Increased tolerance to alcohol
4. Repeated withdrawal symptoms
5. Relief of withdrawal symptoms by further drinking
6. Subjective awareness of the compulsion to drink
7. Reinstatement after abstinence.
A dependent person who drinks again after a period of abstinence is likely to relapse quickly and return to his old drinking pattern within a few days.

Alcohol-related disabilities are the physical, psychological and social problems associated with excessive drinking. Patients with alcohol-related disabilities may not have symptoms of alcohol dependence syndrome but those with alcohol dependence syndrome usually present with a myriad of disabilities.

This paper presents the characteristics of patients who were hospitalised because of alcohol-related disabilities and alcohol dependence syndrome.

MATERIAL AND METHOD

This study comprised only those patients with alcohol-related problems who were referred for psychiatric assessment. All referrals were inpatients from the Singapore General Hospital. Besides a physical examination, investigations (as when necessary) included a full blood count, liver function test, blood glucose, electrolytes, vitamin B12, folate, chest x-ray, skull x-ray and electroencephalogram. The social history focussed on problems in the family, marriage, employment and legal problem e.g. driving offences, theft, accidents and disorderly behaviour. In the drinking history the following questions were asked: age of first drink, years of drinking, types of alcohol, quantity and frequency per week, and whether alone or in the company of friends. In addition they were requested to fill in a questionnaire called the Severity of Alcohol Dependence Questionnaire (SADQ). This instrument was designed by Stockwell et al (2) and subsequently refined by them (3). It consists of 20 questions in five sections, namely: physical symptoms of withdrawal, affective symptoms of withdrawal, craving and withdrawal-relief drinking, typical daily consumption and rapidity of reinstatement of symptoms after a period of abstinence. Each item has a four-point frequency scale, ranging from "almost never" to "nearly always" and the maximum total score is 60. It has been suggested that at above a cut-off score of 30, there would be moderate to severe dependence.

The demographic characteristics of the patients noted included age, sex, ethnic group, marital status and employment. Statistical analysis was by t-test for age and SADQ scores.

RESULTS

There were 62 patients in this study and the reasons

for hospitalisation are shown in Table 1. The majority (71%) were admitted for psychological or social reasons — 28 (45.1%) attempted suicide, 12 (19.4%) disorderly behaviour and 4 (6.5%) depression. In attempted suicide alcohol was consumed together with drugs like benzodiazepines (diazepam), analgesics (paracetamol) and anti-depressants (amitriptyline). Differences between the sexes are evident. Of the 23 women, 19 were hospitalised because of attempted suicide arising from relationship conflict. Most of the women did not have any physical complaint arising from alcohol; they were generally younger (mean age 27.2 years) and not heavy drinkers (mean SADQ score 1.7)

TABLE 1
REASONS FOR HOSPITALISATION

| | Number of patients | | |
|----------------------|--------------------|-------|-------|
| | Men | Women | Total |
| Attempted suicide | 9 | 19 | 28 |
| Drunk and disorderly | 11 | 1 | 12 |
| Generalised weakness | 10 | — | 10 |
| Abdominal discomfort | 5 | 1 | 6 |
| Depression | 2 | 2 | 4 |
| Fits | 2 | — | 2 |
| Total | 39 | 23 | 62 |

Amongst the men, 17 (43.0%) presented with physical ill health and 11 (28.2%) for disorderly behaviour. The men were older (mean age 46.4 years) and were more severely dependent (mean SADQ score 15). The differences between the sexes in age and SADQ scores were significant ($p < 0.001$) as seen in Table 2.

TABLE 2
CHARACTERISTICS OF MEN AND
WOMEN DRINKERS

| | | Age of years (mean \pm s.d.) | SADQ Scores (mean \pm s.d.) |
|-------|----------|-----------------------------------|----------------------------------|
| Men | (n = 39) | 46.4 \pm 4.5 | 15 \pm 2.1 |
| Women | (n = 23) | 27.2 \pm 4.1* | 1.7 \pm 0.5** |

* t = 14.9 p < 0.001

** t = 37.7 p < 0.001

It is possible to divide the patients into 3 categories, according to disabilities and severity of drinking: (a) those with alcohol dependence syndrome, (b) those without dependence syndrome but with psychological and social disabilities (c) those without alcohol dependence syndrome but with physical, psycholo-

gical and social disabilities. The 3 groups differed significantly ($p < 0.001$) in severity of alcohol dependence as noticed in the SADQ scores (Table 3).

They also differed in age — patients with alcohol dependence were oldest and those with psychological and social disabilities were youngest — the difference are significant ($p < 0.001$).

Comparing the two ethnic groups, most of the Chinese patients (73.7%), presented with psychological and social disabilities but the majority of patients with alcohol dependence syndrome (90%) were Indians.

dependence syndrome there were 2 with delirium tremens. They experienced visual and auditory hallucinations and were admitted because of agitated behaviour. The predominant problem in all the patients was relationship conflict, and it involved mainly the family or marriage. Employment problems were common and especially in those with alcohol dependence syndrome.

All the 10 patients with alcohol dependence syndrome were men. Most of them started drinking in their early twenties and had consumed alcohol for over 15 years. They began with a bottle of beer (a pint) and tended to drink on weekends with friends. The

TABLE 3
CHARACTERISTICS OF PATIENTS

| | SADQ Scores (mean \pm s.d) | Age in years (mean \pm s.d) | Ethnic Groups | | |
|---|---------------------------------|----------------------------------|---------------|---------|-------|
| | | | Indian | Chinese | Total |
| Psychological + social problems | 2.2 \pm 0.9 | 25.8 \pm 4.6 | 7 | 28 | 35 |
| Physical, psychological + social problems | 5.2 \pm 0.8 | 40.1 \pm 4.3 | 8 | 9 | 17 |
| Alcohol Dependence syndrome | 17.7 \pm 2.6 | 52.4 \pm 7.5 | 9 | 1 | 10 |
| | — | — | 24 | 38 | 62 |

The physical disabilities noted were poor nutritional status (including iron, vitamin B₁, B₁₂ and folic acid deficiency), gastritis, peptic ulcer, liver diseases and peripheral neuropathy (Table 4). The types of liver diseases diagnosed were cirrhosis (2), hepatitis (1) and fatty liver (7). All the patients with alcohol dependence syndrome had associated physical problems and these were commonly nutritional anaemia, peripheral neuropathy and gastritis.

TABLE 4
PHYSICAL DISABILITIES

| | Number of patients n = 62 |
|---|---------------------------------|
| Poor Nutritional status (including vitamin deficiency) | 20 |
| Gastritis and peptic ulcer | 15 |
| Liver diseases | 10 |
| Peripheral neuropathy | 9 |
| Wernicke-Korsakoff syndrome | 1 |

The psychological and social disabilities in all the patients are as indicated in the Table 5. Depression was evident in 32 patients (51.6%), and the common sexual problems were loss of libido and erectile impotence. Amongst the patients with alcohol depen-

TABLE 5
PSYCHOLOGICAL AND SOCIAL DISABILITIES

| | Number of patients n = 62 |
|-----------------------|------------------------------|
| Depression | 32 |
| Sexual problems | 14 |
| Anxiety | 8 |
| Delirium tremens | 2 |
| Dementia | 2 |
| Relationship problems | 44 |
| Employment problems | 26 |
| Driving offences | 10 |
| Assault | 5 |
| Theft | 2 |

pattern of consumption changed over the years and before hospitalisation all of them could drink half a bottle of whisky or a bottle of wine and 4 bottles of beer daily (at this stage they usually drank alone).

DISCUSSION

Epidemiological analysis has indicated that a rise in per capita consumption of alcohol is associated with an increase in hospital admission of people with alcohol-related problems (4). In Singapore there has been an alarming increase in alcohol intake as

measured by the consumer price index. In 1977-78, a Singapore household spent about \$5.47 monthly on beer and stout, and \$1.71 on wines and spirits; but in 1982-83 these figures were \$8.19 for beer and stout, and \$2.72 for wines and spirits.

This study comprised only those patients who were referred for psychiatric assessment. Certainly there were other patients with alcohol problems in the general medical, surgical and orthopaedic wards who were not referred — they would increase the frequency of those with physical complications. A London survey revealed that 29 per cent of men and 8.5 per cent of women admitted to medical and orthopaedic wards were classified as problem drinkers (5). Hospital statistics do not reflect the prevalence of disabilities in the general population and it is expected that there are many people with alcohol problems who have not seen a doctor mainly because they have not developed physical symptoms. Moreover in routine clinical practice they remain undetected because the problem drinker is unlikely to volunteer this information and may even deny it. Often doctors do not elicit a detailed drinking history or may attempt to avoid an embarrassing topic.

It is a misconception that alcohol is solely a problem amongst men. In this study the male-female ratio was 1.7:1, and comparing the sexes the women were younger and less heavy drinkers with less physical problems. Most of them resorted to drinks because of relationship problems with the husband or boyfriend. In contrast the men tended to drink more heavily and had more physical disabilities — all those with alcohol dependence syndrome were men. The majority of women were hospitalised because of attempted suicide and men for drunken behaviour or physical illness.

It appears that the severity of drinking as measured by the SADQ scores is related to the types of disabilities and the development of the alcohol dependence syndrome. There is a gradation of scores — those with symptoms of alcohol dependence syndrome had the highest SADQ scores and those with only psychological and social disabilities had the lowest. None of the patients scored more than 30, which is the cut-off point for moderate and severe dependence. Therefore compared to the British drinkers the patients in this study with definite alcohol dependence syndrome had only a mild degree of dependence. The development of alcohol dependence syndrome is probably related to the years of consumption. Those patients with this syndrome had a history of drinking for about 20 years and those with psychological and social problems had been drinking less than five years.

Most of the patients in this study had ill-health arising from a diet lacking in protein, iron and vitamins (B₁, B₁₂ and folate). Their wages were spent on drinks and food was neglected. There were only two patients

with alcohol dependence who had liver cirrhosis. It is said that alcohol-induced cirrhosis is different from other types of cirrhosis in that Dupuytren's contracture, parotid enlargement, pyrexia and peptic ulcer are more likely (6). The peripheral neuropathy affects both sensory and motor systems, mainly in the lower limbs.

There is an association between alcohol and depression. A feeling of low mood arising from interpersonal conflict or life circumstances may precede heavy alcohol intake; but conversely excessive drinking could beget family or marital disharmony. The commonest reason for hospitalisation was attempted suicide by women with relationship problem. Alcohol abuse contributes to as many as one third of divorces (7) and domestic violence like wife or child battering is common. The home environment is not conducive for children who tend to develop neurotic or behaviour disorder (8). Work performance of those with a drink problem is usually poor and there is more absenteeism. Driving offences and crimes including homicides (9) are related to alcohol consumption.

The destructive effects wrought by alcohol is not limited to the drinker's physical and mental health but they also engulf the family, employment and community.

ACKNOWLEDGEMENT

I wish to thank Associate Professor Tsoi Wing Foo for reading and commenting on the manuscript.

REFERENCES

1. Edwards J, Gross M M: Alcohol dependence — provisional description of a clinical syndrome. *Brit Med J.* 1976; 1: 1058-61.
2. Stockwell T, Hodgson R, Edwards G, Taylor C, Rankin M: The development of a questionnaire to measure severity of alcohol dependence. *Brit J Addiction.* 1979; 74: 79-87.
3. Stockwell T, Murphy D, Hodgson R: The severity of alcohol dependence questionnaire — its use, reliability and validity. *Brit J Addiction.* 1983, 78: 145-55.
4. Cartwright AKJ, Shaw SJ: Trends in the epidemiology of alcoholism. *Psychol. Med.* 1978; 8:1.
5. Jarman CMB, Keller J M: Alcoholism in the general hospital. *Brit. Med J.* 1977; 2: 469-72.
6. Murray R, Cutting J: Alcoholism in the general hospital. In Creed F, Pfeffer J M, eds. *Medicine and Psychiatry.* Pitman 1972, 396-410.
7. Ritson E B, Chick J D: Dependence on alcohol and other drugs. In: Kendal R E, Zealley A K eds. *Companion to Psychiatric Studies.* Churchill livingston. 1983; 412-438.
8. Gelder M, Gath D, Mayou R: Dependence on alcohol and drug. In: *Oxford Textbook of Psychiatry.* Oxford University Press. 1983; 422-456.
9. Kua E H, Ang A L, Yuan A T: Homicide in Singapore. *Sing. Med. J.* 1984; 25: 61-63.