

Short report

Alcohol use in chronic fatigue syndrome

James Woolley, Roz Allen, Simon Wessely*

*Academic Department of Psychological Medicine, Guy's, King's & St Thomas's School of Medicine and Institute of Psychiatry,
103 Denmark Hill, London SE5 8AF, UK*

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Abstract

Objective: To examine the anecdotal observation that patients with chronic fatigue syndrome develop alcohol intolerance. **Methods:** A consecutive case series of 114 patients fulfilling UK criteria for chronic fatigue syndrome referred to a specialist clinic. Self-reported alcohol use pre- and postdiagnosis, fatigue symptoms and comorbidity measures were collected. **Results:** Two-thirds reduced alcohol intake. The most common reasons were increased tiredness after drinking (67%), increased nausea (33%), exacerbated hangovers (23%) and sleep disturbance (24%). One-third of

the subjects also stopped drinking because “it seemed sensible.” Some had been advised to avoid alcohol, but the majority (66%) did so on the basis of personal experience. **Conclusion:** Our data supports the anecdotal belief that chronic fatigue syndrome patients reduce or cease alcohol intake. This is associated with greater impairment in employment, leisure and social domains of function, and may hint at psycho-pathophysiological processes in common with other conditions that result in alcohol intolerance. © 2004 Elsevier Inc. All rights reserved.

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Introduction

Chronic fatigue syndrome is a symptomatic illness of uncertain aetiology. It is defined by operational criteria such as those devised by Fukuda et al. [1]. They suggested that diagnosis is defined by the presence of clinically evaluated, unexplained persistent or relapsing chronic fatigue, along with at least four specific concurrent symptoms. These include memory or concentration impairment, muscle pain, joint pain, headaches or unrefreshing sleep [1,2].

The aetiology of CFS remains poorly understood but is likely to be multifactorial, for which there is a mounting base of epidemiological, psychological and physiological research evidence [3–5]. There is no diagnostic test and prognosis is difficult to predict [6].

It is often asserted that alcohol intolerance is common in patients with chronic fatigue syndrome [7]. This association was first documented almost 150 years ago:

“... the fact that neurasthenic patients seldom tolerate the use of alcoholic stimulants. A single teaspoonful will

often produce flushing of the face, burning heat of the eyelids and distress in the head.” [8]

We report a study of self-recounted alcohol intolerance in chronic fatigue syndrome and its associations.

Methods

Participants

We studied a consecutive series of 114 patients who met UK criteria for CFS, referred by general practitioners or consultants to a chronic fatigue clinic at King's College Hospital, London. A diagnosis of CFS was confirmed on clinical and operationally defined grounds (CDC 1994 criteria) [1] using standard history and examination along with fatigue and nonspecific symptom checklists.

Questionnaire assessments

Routine clinic measures used in the clinic include the following: The assessment checklist—a screening questionnaire to record sociodemographic characteristics including sex, ethnicity, age, occupation and marital status along

* Corresponding author. Tel.: +44-20-7848-0448; fax: +44-20-7848-5129.

E-mail address: s.wessely@iop.kcl.ac.uk (S. Wessely).

with eight aspects of illness data including onset, duration (used to support the reliability of self-report data on alcohol use) and comorbid conditions. This was combined with information from the referring doctor to give a fuller description of comorbid diagnoses, past history and previous medication. Further comorbidity and function data was gathered using the General Health Questionnaire (GHQ)—a 12-item Likert scale covering aspects of general health over the previous few weeks [9], with additional questions on adjustment in home, work, leisure, relationship and social domains. A history of substance misuse was excluded. Fatigue and associated symptoms were measured by the Chalder Fatigue Questionnaire (previously shown to be a reliable and valid tool [10]), with Likert measures of eight physical and six mental domains of symptoms.

Each patient was administered an alcohol sensitivity checklist with eight questions on relative change in alcohol intake, estimation of absolute weekly unit intake at different times and subjective reasons for changes in consumption (for which multiple selections could be made). It was designed for this study to be a consistent and relatively reliable way to obtain information, within the usual constraints of self-report data, and led to a high completion rate. There is no existing standardised alcohol questionnaire to specifically assess quantitative or reasons for changes in alcohol use related to illness onset, especially for CFS. So to indicate a degree of internal reliability of our self-report data, questions were included to assess subjective illness duration and absolute as well as relative changes in alcohol intake. Patients were asked what the average alcohol intake was before the onset of CFS, and then the lowest, highest and average intakes after the onset of CFS.

In all cases, the questionnaires were completed at the start of clinic attendance, irrespective of eventual treatment received or subsequent loss to follow-up. Only two participants failed to supply alcohol use data (1.75%), and GHQ/fatigue scoring details were not available for three subjects (2.6%) due to administrative issues.

Results

Table 1 illustrates the demographics, alcohol use, reasons for alcohol reduction and comorbidity.

Overall, this sample is typical of chronic fatigue patients seen in specialist services, and not of CFS in primary care or the community [11]. The response rate to alcohol questionnaires was 98.25% and showed that approximately two-thirds ($n = 74$, 65%) of patients reduced or stopped alcohol intake altogether. There was no statistically significant difference between the ongoing or reduced alcohol users in terms of demographic variables, duration of illness or medication type.

A range of possible reasons for decreasing alcohol intake were presented, the most popular being increased

Table 1

Demographic breakdown, comorbidity and change in alcohol intake after CFS onset

Subjects	<i>n</i> (%)		
Sex	114 (100%)	Social class	80 (70%) ^a
Male	42 (37%)	Professional	20 (26%)
Female	71 (63%)	Intermediate	5 (7%)
Marital status	80 (70%) ^a	Skilled	24 (32%)
Married	36 (45%)	Housewife	5 (7%)
Single	31 (39%)	Unemployed	11 (14%)
Other	13 (16%)	Other	11 (14%)
Age	Mean 38.15 years (range 18–73, S.D. 11.63)		
Comorbid diagnoses		Alcohol use	
Depression	24 (21%)	Not changed	33 (28.9%)
Generalised anxiety disorder	4 (3.5%)	Increased	7 (6.1%)
Specific phobia	3 (2.6%)	Decreased	74 (64.9%)
Agoraphobia	2 (1.8%)	Stopped	31 (27.2%)
Morbidity grief reaction	2 (1.8%)	Reduced	43 (37.7%)
Anorexia	1 (0.9%)		

Reason for alcohol decrease	<i>n</i>	Percentage of those who reduced intake (%)
Felt more tired	50	67
Made me nauseous	25	33
Seemed a sensible thing to do	24	32
Interfered with sleep	18	24
Hangovers got worse	17	23
Felt more depressed/anxious	12	16
Others advised reduction	10	14
Doctor advised me to avoid alcohol	8	11
Did not like the taste	6	8
Can give no reason	2	3

^a Incomplete demographic data available due to clinical administrative difficulties during the study period.

tiredness after drinking ($n = 50$, 67%). Physical symptoms of increased nausea ($n = 25$, 33%) and exacerbated hangovers ($n = 17$, 23%) and sleep disturbance ($n = 18$, 24%) were also common.

Approximately one-third ($n = 25$, 33%) of subjects also stopped drinking because “it seemed sensible.” Group comparisons were made using the Mann–Whitney *U* test, a nonparametric rank sum test of independent samples. This showed that the “stopped drinking because it seemed sensible” group differed significantly from the others in that a greater proportion had been advised by their doctor to avoid alcohol (Mann–Whitney *U* test; $P = .007$), and they subjectively felt more tired (Mann–Whitney *U* test; $P = .032$). In other words, one-third decreased alcohol intake as a result of advice, but the majority did so on the basis of their own experience.

Comorbidity

The information on the patients who reduced alcohol intake was cross-correlated with the detailed symptom

checklists and GHQ. One important confounding factor to examine was depression [12]. This was assessed both in the GHQ and the assessment checklist. Using a Mann–Whitney *U* test, there was no significant difference in the prevalence of depressive symptoms between the group who reduced or stopped alcohol use and those who remained unchanged or even increased their alcohol intake. (Asymptotic Significance: $P=.183$ for the assessment checklist depression question, and $P=.565$ for the GHQ depression item).

Impairment

Many GHQ items measure domains of impairment. Using Mann–Whitney *U* tests, the group who noted reduced alcohol intake also scored themselves highly for reduced memory ($P=.012$), reduced ability to find the correct work ($P=.037$), ability to work impairment ($P=.014$), home management impairment ($P=.058$), social/leisure activity impairment ($P=.001$) and private leisure activity impairment ($P=.035$). Notably, their ability to form and maintain relationships was unaffected.

There was no significant difference on the more cognitive or affective items. For example, negative cognitions, perceived ability to face up to problems or ability to enjoy normal day-to-day activities.

Discussion

In this study of 114 CFS patients referred to a hospital fatigue clinic, two-thirds claimed that they had reduced or stopped alcohol intake altogether. This supports the widely expressed anecdotal view.

The most common reasons given for a reduction in alcohol use were of an exacerbation of physical symptoms (fatigue, nausea, sleep disturbance or hangovers). Worsening of any depression or anxiety symptoms was much less common. Interestingly, about one-third of alcohol reducers also gave a “common sense” nonspecific reason, some spontaneously and others in response to advice to cut down. But at least two-thirds reduced intake independently as a result of specific physical symptom worsening.

This study does have methodological problems, namely its reliance on self-report and retrospective nature. However, previous self-report surveys of alcohol consumption within a psychiatric population have shown reasonable interrater and test–retest reliability coefficients [13]. Validity is more difficult to verify. Also, the subjects were drawn from a specialist CFS clinic so results cannot be generalised to other settings.

One issue that continues to be a source of controversy is the relationship between CFS and depression. There have been reports of both similarities and differences on numerous different measures and investigative tools. As regards the relationship to alcohol intake, we now report one difference with major depression. In a comparable study,

Bernadt and Murray [13] found that depressive patients as a group show an overall lack of change in alcohol intake. The group they labelled as “minor depressive disorder,” which, in terms of symptom clusters, could be considered the closest to CFS, showed, if anything, a tendency to drink a little more in the month before admission.

Regarding potential pathophysiology, it is interesting to note other medical disorders associated with reduction in alcohol use. Perhaps the most pertinent are acquired alcohol intolerance syndromes. These can be found in patients with Hodgkin’s disease or other malignancies, in hypereosinophilia syndrome, mastocytosis, after splenectomy and with specific drug use (e.g., chlorpropamide, tolbutamide, disulfiram and cephalosporins). Classic descriptions of flushing syndromes include subjective feelings such as nausea, dizziness, anxiety, headache, fatigue and light-headedness [14].

Conclusion

We present self-report data to support the previously anecdotal observation that chronic fatigue syndrome patients reduce or cease alcohol intake. It may provide additional support for the nosological distinction of CFS as a discrete entity, particularly differentiating it from depression. Comparison with other illnesses linked with acquired alcohol intolerance may also provide some aetiological clues, linking with theories such as neuroendocrine, immunological and cognitive attribution.

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