The Association between Alcohol Dependence and Depression before and after Treatment for Alcohol Dependence

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1. Introduction

The prevalence of comorbidity of depression and alcohol use disorders (AUD) has been demonstrated in a number of researches [1–4]. Depression in alcohol-dependent persons has been reported not only lower the resolve to resisting alcohol use, but may also lead to use of alcohol to relieve the depressive symptoms [5, 6]. It is important to understand the significance of co-occurrence of depression and alcohol use disorders since this may explain why majority of cases relapse after treatment for alcohol dependence [5, 6]. In addition it may explain why antidepressants have been shown to moderately benefit patients with both depression and alcohol use disorders [7].

In Kenya a study by Ndetei et al. showed that there was positive correlation between major depressive illness, panic disorder, and alcohol abuse among patients admitted at the main referral psychiatric hospital [8]. Although the cooccurrence of depression and alcohol use disorders has been confirmed by several studies, the relationship between the two disorders has been difficult to describe [9]. This co-occurrence is at prevalence rate of 16%–68% [10]. Studies have attempted to differentiate between depressed and non-depressed alcohol-dependent persons with particular focus on the participant’s level of alcohol dependence, demographic characteristics, or illness-related variables. It has been shown that depression is more related to the current alcohol drinking episode than lifetime diagnosis of depression [11]. Depression diagnosed in the current episode of alcohol dependence normally remits after 2 weeks of detoxification and abstinence and falls to normal range within 3 weeks [11, 12]. The rapid recovery is in contrast to the slower
and institution-based detoxification and rehabilitation of alcohol-dependent persons. The sample was purposefully selected. The study was conducted at the Kangemi informal settlement located in the west of Nairobi city in Kenya in 2008. The study area has a high population of people with use disorders, particularly alcohol dependence [37]. Consenting participants aged 18 years and over were included in the study if they were alcohol-dependent with an AUDIT score of 15–40 (for males) and 13–40 for females. Persons aged 18 years and over are legally eligible to consent. Consent explanation was given before the participant gave consent. All aspects of detoxification and rehabilitation including medication, dosage and side effects, and right to withdraw at any time during study were explained after which consenting individuals signed a consent. Ethical approval was obtained from the Kenyatta hospital/University of Nairobi research and ethical review board. Excluded from the study were those unavailable or unwilling to join the study for the 6 months. Those suffering from severe medical and neuropsychiatric complications (including delirium tremens, active psychosis (hallucinations, delusions), suicidal thoughts and tendencies, and severe memory difficulties) at time of screening for intake were also excluded. Those with multiple drug use/abuse were included in the study. A total of 20 persons were excluded.

A researcher-designed sociodemographic questionnaire (SDQ) was administered at intake to provide necessary information including that which was needed for followup of participants. Alcohol Smoking Substance Use Identification Screening Test (ASSIST) [49] was used to screen for alcohol and other substance use and alcohol-related problems. The PAPI version of the Composite International Diagnostic Interview (CIDI) [50] instrument was administered to screen for psychiatric comorbidity. Both the ASSIST and the CIDI were administered both at intake and at six months.

The participants were subjected to alcohol detoxification for 10 days using a pair of ampoules of Pabrinex 1 & 11 given by intravenous injection daily for 3 consecutive days, Diazepam 5 mg and Carbamazepine 200 mg for 5 and 10 consecutive nights, respectively, on outpatient basis at intake. Pabrinex is parenteral high-potency Vitamin B and C combination. Although the study participant had a general physical examination done (including blood pressure, temperature, and body weight check), no laboratory or radiological investigations were done in the current study. Low doses of benzodiazepine were given to all participants to avoid heavy sedation that would complicate existing medical conditions. Similarly low doses of Carbamazepine were used.

There was documented followup at home for each participant by the community-based health worker (CBHW) twice a week, and the principal researcher (PI) or assistant (once a week) at Kangemi Heath Centre for a period of 6 months. A follow-up questionnaire was used to determine whether individual was abstaining from alcohol and symptoms that they were experiencing. This was filled once a week by the principal researcher and twice a week by the CBHW. Both the PI and the CBHW reports on the drinking status of the participants were compiled weekly. Any discrepancy between the two structured reports was confirmed by a home visit by the CBHW.
There was a bimonthly group therapy conducted in
groups of 20 s by the PI and a clinical psychologist.

3. Data Analysis
Data collected was coded, entered, and stored in computer.
Only the PI had the name related to the code number. The
data was analyzed using STATA version 10 and descriptive
and inferential statistics performed.
A logistic regression analysis was done to determine
factors associated with presence of depression. The data
obtained by use of the composite international diagnostic
interview was analyzed for major depression.

4. Results
A total of 188 participants underwent community-based
detoxification but only 156 were followed up for the six
months. Majority (91.5%) were male and 8.5% were female.
Majority (60.5%) of the participants had begun drinking
alcohol before the age of 18 years, with the mean AUDIT
score being 28.6 for male and 26.6 for females. The mean
age of the group was 31.9 years, with majority (84%) of
the participants aged below 40 years. The majority (53.3%)
of the participants earned an income of less than 143
United States dollars per month. The majority (51.1%)
were married, while 38.9% were single. The remaining
participants were either separated or divorced.
The prevalence of depression at intake before detox-
ification was 63.8% (120 participants). Six months after
detoxification and completion of rehabilitation the preva-
ience of depression was 30.2% (47 participants). There
was a statistically significant reduction (P value 0.000) in the
prevalence of depression at six months during which period
the participants had undergone community-based detoxi-
fication and rehabilitation for alcohol dependence. Three
participants were referred for treatment of major depression
within the period of the study.
There was a statistically significant association (P value
0.002) between depression and the level of alcohol dependence
at intake. Participants with an AUDIT score of 19
and above were more likely to be depressed. There was no
statistically significant association between depression and sociodemographic characteristics.
Analysis of data collected at the end of the sixth month
showed a statistically significant association between depres-
sion and alcohol use (P value 0.02). In addition those who
were depressed at six months had more severe craving for
alcohol than those who were not depressed (P value 0.03).
Polysubstance use was noted, with 50% of the partic-
ips using tobacco while 21.3% of them were using can-
nabis. Less than 1% of the participants used other substances
of abuse.

5. Discussion
Several studies have demonstrated the extent of comorbidity
between depression and alcohol use disorders [1–4]. The
current study confirms the high prevalence rates (63.8%)
craving. This association between depression and craving may necessitate those individuals who are still depressed after alcohol detoxification and rehabilitation receive antidepressants to possibly reduce the chances of relapse to alcohol use.

6. Limitation

The study sample was one of convenience, purposely selected for alcohol detoxification and rehabilitation. Secondly, no past psychiatric history of depression or family history of mood disorders was obtained from the participants at intake. Such a sample may produce skewed prevalence rates of depression.

7. Conclusion

(1) The prevalence of depression among alcohol-dependent persons is high.

(2) There is recovery from depression after alcohol detoxification and rehabilitation, and majority of the cases do not necessarily require treatment for the depression.

(3) In addition persons that are depressed have a significantly higher craving for alcohol after detoxification and rehabilitation.

(4) It is important to screen for depression and evaluate to determine the treatment needs during detoxification and rehabilitation.

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