TREATMENT SETTING AND FOLLOW-UP IN ALCOHOL DEPENDENCE

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ABSTRACT

This study aimed at evaluating patient and treatment variables influencing six month treatment outcome in alcohol dependence. 134 serially registered patients selected their treatment setting as either outpatient or inpatient. Sociodemographic variables, alcohol consumption patterns, drinking consequences were measured at intake. Following treatment, drinking patterns and consequences were re-measured at three and six months follow up in each of the groups. 86 of 134 chose the inpatient program and 48 the outpatient program. Overall, 56 maintained total abstinence, and 11 had significantly reduced alcohol consumption at six months follow up. The inpatient group did marginally better than the outpatient group. More severely dependent patients, those with greater physical and psychosocial consequences opted for an inpatient program, and did well. Less severely dependent patients did favourably with outpatient intervention alone. Improvements made within the first three months tended to influence subsequent treatment compliance. The observation that less severely dependent individuals who opted for outpatient services did favourably suggests that extensive treatment may be required only for those with more severe dependence or greater psychosocial consequences. Our findings also highlight the need for developing community based low cost interventions.

Key words : Alcohol dependence, treatment setting, outcome

Treatment for alcohol dependence is directed towards reducing a person's alcohol consumption and alleviating associated physical, psychological and social complications. Numerous treatment models are available for alcoholism. Recent studies suggest brief interventions in alcohol treatment to be as effective as extensive inpatient treatment (Chick et al., 1988; Edwards & Guthrie, 1967; Lindstrom, 1992) though not all studies support this view (Finney et al., 1996; Heather, 1995). Moreover, there is a paucity of information on the effectiveness of the various treatment models. Even after extensive research, we know little about the most effective methods of delivery for alcohol deaddiction services (Drummond, 1997). One of the major limitations of most of the studies is a high attrition rate. The lack of follow up is specially relevant in developing countries like India, where finances and infrastructure are not available to trace the subjects who do not come for follow-up. The current study analyses the factors that determine the choice of treatment setting and follow-up of subjects with alcohol dependence.

MATERIAL AND METHOD

This prospective study was carried out in the Deaddiction Centre at National Institute of Mental Health and Neuro Sciences (NIMHANS), Bangalore. All newly registered patients over the age of 16 years presenting to the outpatient clinic over a three month period fulfilling the diagnosis of Alcohol Dependence Syndrome (ICD-10, 1992) were included in the study. Individuals with
comorbid psychiatric disorders or other substance abuse (apart from nicotine) were excluded.

Patients were evaluated on a semi-structured proforma to assess their socio-demographic and alcohol consumption profiles. The details of alcohol consumption, years of drinking, average quantity in grams and family history of alcohol abuse were obtained. Patients were evaluated for psychiatric complications like psychosis, hallucinations, deliberate self harm, depression, anxiety, delirium tremens, Wernicke-Korsakoff's syndrome and psychopathic personality. History of marital and family discord, job loss, absenteeism, financial loss, problems with law and drunken brawls were specifically obtained. All patients had detailed medical and psychiatric evaluation. Liver function tests including gamma glutamyl transferase and mean corpuscular volume were done in all subjects. Other consultations and laboratory tests were obtained if required. All patients were offered the inpatient program. Those who declined this were treated as outpatients.

The inpatient treatment program includes in hospital detoxification followed by five to six group therapy sessions for the patients and two-three sessions for the families. The group therapy session are interactive, aimed at breaking denial and increasing understanding about alcoholism as an illness. Two to three sessions deal with relapse prevention methods. Additional individual, family or behaviour therapy is decided by the treating team comprising a resident, three senior psychiatrists and a psychiatric social worker. Disulfiram or other pharmacotherapy is similarly decided upon with the informed consent of the patient. Total duration of hospitalisation ranges from four to six weeks. Subsequently patients are expected to follow up in the outpatient once a fortnight and attend an hour's educative group session. The outpatient service includes evaluation, outpatient detoxification and weekly group therapy sessions for the patients and their families. This group session is educative in nature.

Follow up assessment on a semistructured proforma was done at three and six month intervals, by interviewing the patient, a significant family member and repeating liver function tests. The interview included assessment of drinking behaviour, treatment, general health and functioning in occupational, social and family spheres. Letters were sent to those who missed their appointments. A minimum of three letters were sent spaced over a month. Those who failed to come despite this were considered treatment dropouts.

The predictors of choice of treatment programme and follow up were computed using the chi-square test. The predictive power of the patient and treatment variables in influencing overall outcome was determined using multiple stepwise regression.

RESULTS

Patient characteristics: Among 140 consecutive patients satisfying the inclusion criteria there were 135 men and five women. Ninety patients chose the inpatient program and 50 opted for the outpatient program. Comparison between these two groups is shown in Table 1. Four patient variables contributed to the choice of treatment setting in 86.7% of cases on logistic regression analysis. These were problems at work, alcohol related psychosis, abnormal liver functions tests and hepatitis.

Follow-up: Six subjects, four from inpatient group and two from outpatient group, withdrew from the study before completing the initial treatment program. Among 134 subjects who completed the program, 48 (35.8%) patients did not come for follow up at three months. They had lower income (below Rs.1000/month), lower prevalence of alcoholism in family and lower frequency of social problems like marital discord and problems at work. The inpatient group tended to have better follow up than outpatient group at three months although this was not borne out on multiple regression analysis (Table 2).
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TABLE 1

COMPARISON BETWEEN INPATIENTS AND OUTPATIENTS

| Variables            | Categories | Outpatient n=50 | Inpatient n=90 | Chi-square | d.f. | p     |
|----------------------|------------|-----------------|----------------|------------|------|-------|
| Income               | <1000      | 37              | 53             | 2.93       | 1    | NS    |
|                      | >1000      | 13              | 37             |            |      |       |
| Marital status       | Married    | 48              | 73             | 6.07       | 1    | <0.01 |
|                      | Single     | 02              | 17             |            |      |       |
| Family history       | Present    | 18              | 58             | 10.21      | 1    | <0.01 |
|                      | Absent     | 27              | 26             |            |      |       |
| Alcoholism NA=11     |            |                 |                |            |      |       |
| Discord in the family| Present    | 19              | 48             | 4.30       | 1    | <0.05 |
|                      | Absent     | 31              | 42             |            |      |       |
| Problems at work     | Present    | 11              | 61             | 27.77      | 1    | <0.001|
|                      | Absent     | 39              | 29             |            |      |       |
| Financial loss       | Present    | 18              | 66             | 18.67      | 1    | <0.001|
|                      | Absent     | 32              | 24             |            |      |       |
| Hepatitis/abnormal LFT| Present    | 02              | 24             | 10.92      | 1    | <0.001|
|                      | Absent     | 48              | 66             |            |      |       |
| Hallucinosis/pyschosis| Present    | 02              | 22             | 9.46       | 1    | <0.001|
|                      | Absent     | 48              | 68             |            |      |       |

NA: Not available, LFT: Liver Function Test, Level of significance < 0.05

There was 53.5% attrition in follow-up between the 3 and 6 months. The comparison between the patients who dropped out after 3 months and those who continued follow-up for six months are shown in table 4. Multiple stepwise regression analysis of factors predicting maintenance of follow-up after three months is shown in table 5. Those with longer drinking history, a positive family history of alcoholism and on disulfiram tended to stay on in treatment whereas those with higher income tended to drop out of follow-up after 3 months. These variables explained 26% of total variance (Table 5).
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**TABLE 4**

| Variables          | Income | Mental discord | Occupational dysfunction | Financial loss | Family history* | Treatment setting |
|--------------------|--------|----------------|-------------------------|----------------|----------------|------------------|
| Categories         | <1000  | >1000          | Present                 | Absent         | Present        | Present          |
| No follow-up       | 30     | 16             | 26                      | 20             | 30             | 33               |
| Follow-up after 3 months | 17 | 23 | 27 | 11 | 25 | 31 |
| n=46               |        |                |                         |                |                |                  |
| p                  |        |                |                         |                |                |                  |

**TABLE 5**

**FACTORS INFLUENCING MAINTENANCE OF FOLLOW-UP FOR SIX MONTHS IN 86 PATIENTS WHO COMPLETED THREE MONTHS OF FOLLOW-UP : MULTIPLE STEPWISE REGRESSION ANALYSIS**

| Variables        | Years of maintenance drinking | Disulfiram | Income | Family history of alcoholism |
|------------------|--------------------------------|------------|--------|-----------------------------|
| Regression Coefficient | 0.02003                       | 0.10629    | -0.19260 | 0.08640                     |
| Standard Error of Regression Coefficient | 0.00673 | 0.03766 | 0.07529 | 0.03977                     |
| t                 | 3.29831                        | 2.82239    | 2.55829 | 2.17267                     |

**TABLE 6**

**INFLUENCE OF EARLY IMPROVEMENT ON FOLLOW-UP**

| Variables          | Dropout after 3 months | Follow-up at 6 months |
|--------------------|------------------------|-----------------------|
| Income             | Yes                     | 14                    |
| Mental discord     | No                      | 17                    |
| Occupational dysfunction | Yes                  | 14                    |
| Financial loss     | Yes                     | 34                    |
| Family history*    | No                      | 16                    |
| Treatment setting  | Inpatient              | 27                    |
| Treatment setting  | Outpatient             | 15                    |
| n=46               |                         |                       |
| p                  | <0.05                   |                       |

**DISCUSSION**

This is a clinic based prospective study on choice of treatment setting and follow-up at three and six months of 140 clients serially registered for an alcohol deaddiction program. All patients were encouraged to take intensive inpatient treatment. However the final choice of the treatment setting was left to the clients and their families. Those with greater complications opted for the inpatient treatment program and those who had less severe alcohol related problems selected outpatient treatment. It is possible that patients with more severe dependence might have been influenced by the treating consultant to opt for inpatient treatment. Treatment setting did not make a significant difference in the outcome at six months. Similar findings have been reported earlier (Edwards & Taylor, 1994; Miller & Hester, 1986; Project MATCH, 1997). The issue of treatment setting is of importance in developing countries where the resources for alcohol deaddiction services are limited. As the patients with complications opted for inpatient treatment, the dropout rate at six months was lower than that of the patients who dropped out at six months. Only one patient continued to drink and his job suffered while maintaining contact with treatment. Five (7%) patients required readmission for relapse of alcohol dependence.
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for in hospital deaddiction and there were no
significant differences in the outcome of two
groups at six months, we feel that the choice of
treatment setting may be left with the clients.

Patients who dropped out early (no contact
at three months) had low income, less alcohol
related problems, and did not have family history
of alcohol dependence (Table 3 & 4). This group
did not respond to mailed communication and
were totally lost to contact after completion of
the initial treatment program. Low income is one
of the variables contributing to the early drop
out. Alternative, more easily accessible
strategies like community based deaddiction
programs may help in keeping these clients on
regular follow-up. A subgroup of patients in the
low income group maintained regular follow-up
for six months. This possibly reflects that global
improvement made in the first three months
would improve their resources and follow-up.
Clients with work related problems kept better
follow-up. Similar findings have been reported
earlier (Zweben & Cisler,1996). Of the treatment
variables, use of disulfiram and longer
hospitalisation predicted a better follow-up at
three months. This may reflect the need and
better utilisation of treatment facilities for patients
on disulfiram and those with more physical
complications prolonging the inpatient stay.
Edward & Guthrie (1967) also reported better
utilisation of hospital facilities by patients who
underwent longer periods of hospitalisation.

The timing of follow-up contact with
patients for evaluating treatment is an important
issue. Lundwall and Backland (1971) advocate
a minimum of six months follow-up for assessing
efficacy of treatment. In the present study follow-
up was attempted for six months. Only 40
patients kept regular follow-up for this period.

The drop-out rate between three and six months
was 53.5%. The variables predicting
maintenance of follow-up at six months included
long drinking history, positive family history of
alcoholism and treatment with disulfiram (Table
4 & 5).

Moos et al. (1990) have emphasized
greater attention on exploring patients’
functioning immediately after treatment and over
several subsequent intervals, to better
understand the treatment and recovery process.
The early gains obtained over the first three
months of treatment tend to influence
subsequent follow-up and treatment compliance.
These include not only abstinence, but also
perceptible improvements in physical health and
finances. In the present study subjective sense
of physical improvement and improvement in
earnings during initial three months after
treatment were significantly associated with
maintenance of follow-up at six months (Table
6). This also highlights the fact that abstinence
from alcohol is not the only early goal of any
intervention strategy.

The data on alcohol use at six months was
available in only 52.9%. Majority of them (81.7%)
maintained total abstinence. The reported
abstinence rate after alcohol deaddiction in India
vary from 36% (Desai et al.,1993) to 50% (Sanjiv
& Kuruvila,1991). In the present study due to
high drop out rate at six months no conclusions
could be drawn on the outcome. A significant
observation was that ten of the eleven patients
who continued to consume alcohol but
maintained contact with the treating team were
from the inpatient group. This probably reflects
that those treated intensively tend to utilize
hospital services better even if the expected or
desired outcome is absent. Similar findings were
reported previously (Edwards & Guthrie,1967).

In conclusion, our findings suggest that
the choice of treatment setting may well be left
with the patients and their families. The severely
dependent patients did choose inpatient
treatment. One of the significant factors for early
as well as subsequent dropping out from the trial
was poor finances. A group of less severe alcohol
dependents did improve with brief intervention.
Hence there is a need for systematic studies to
identify the clients who will do well with brief
interventions. Clients with subjective sense of
physical improvement and better financial
earnings immediately after completing the
deaddiction program maintained regular
follow-up. This makes case for focussing on
comprehensive outcome in the management of alcoholism.

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