A PROSPECTIVE STUDY OF TREATMENT OUTCOME IN ALCOHOL DEPENDENCE FROM A DEADDICTION CENTRE IN INDIA

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ABSTRACT

A naturalistic, uncontrolled follow up study was carried out on 60 cases of alcohol dependence syndrome diagnosed according to DSM-III-R at JIPMER, Pondicherry. At the end of one year, 32.5% of patients could be classified under abstinent and non problem drinker category, 35% continued to drink but showed improvement in social and occupational functioning, 32.5% remained in the unimproved group. None of the pretreatment variables could differentiate patients with favourable outcome from those with unfavourable outcome. Duration of disulfiram use was strongly associated with a favourable outcome.

Key words: alcohol dependence, outcome, disulfiram

Alcohol dependence is a major public health problem in many developing countries. Epidemiological studies conducted in India show high prevalence of alcohol dependence (Mohan et al., 1983, Premarajan et al., 1983). The follow up studies in India suggest that significant proportion of these patients do respond to intervention. Bagadia et al. (1982) reported that more than 50% of patients who continued to take disulfiram showed good to moderate improvement. Sanyei and Kuruvilla (1991), using a postal follow up enquiry reported 37% response rate out of whom 50% remained abstinent for more than 2 years. Desai et al. (1993) found that after 6 to 8 months following initial contact, 36% remained abstinent during the follow up period.

Certain issues are to be addressed while conducting a follow up evaluation. For assessing the efficacy of treatment, an optimum period of 1 year has been advocated (Lundwall and Beckland, 1971). They consider that patients' outcome at the end of one year predicts later functioning and helps in assessing the efficacy of treatment. Further, self reports alone are not sufficient to measure the treatment outcome (Fuller, 1989). There is a debate regarding the usefulness of self reports using postal questionnaires in assessing the outcome. Appropriate strategies are to be adopted to obtain more accurate reports from key relatives to substantiate what is given in the self report. Keeping these issues in mind, this study was designed to evaluate the outcome after one year in patients treated for alcohol dependence.

MATERIAL AND METHOD

The treatment programme consists of a 4-6 weeks period of inpatient stay and subsequent outpatient follow up for 1 year. The treatment team consists of a senior consultant psychiatrist, resident psychiatrist, psychiatric social worker and a psychiatric nurse. Initially patients undergo detoxification with diazepam, vitamins and when necessary, intravenous fluids. After detoxification, the patients attend group therapy sessions. The sessions are conducted twice a week. The number of participants range between 5 and 8 and the allotted time is 1 hour. The group discusses a specific topic during each session. The group sessions are conducted according to the methods suggested by Yale (cited in Yalom, 1985). The patients also attend small lectures, using audio-visual aids such as video and flip charts on alcohol related problems. All patients without any medical and psychiatric contraindications are offered disulfiram. No alcohol challenge test is administered. The dose of disulfiram is 250 mg once daily. All patients were informed in detail about the experience they are likely to undergo if they consume alcohol while on disulfiram. After discharge from the hospital, patients are advised to
attend the follow up clinic. Patients are asked to come once a fortnight to collect disulfiram. Follow up details including abstinence, any drinking episodes, problems in the social and occupational areas are enquired into and recorded. Those who refuse disulfiram also are advised to come once in a fortnight to meet the psychiatrist for the follow-up evaluation. Postal reminders are sent to patients who fail to turn up for follow up for 1 month. In case, no response is elicited for three consecutive postal reminders, no further reminder is sent.

The patients of alcohol dependence, hailing from in and around Pondicherry, meeting the DSM-III-R criteria (American Psychiatric Association, 1987), were included in the study in a consecutive manner, from January 1992 to June 1992. All patients underwent the 4 weeks of inpatient treatment programme and were from the district of Pondicherry. Patients with secondary alcoholism (Schuckit, 1985) and significant medical problems were excluded from the study. Thus sixty patients participated in the study.

Mean age of the sample was 39.6 (±8.5) years, 49 (81.6%) patients were married and 11 (18.3%) were unmarried, 34 (56.6%) had stable employment, 23 (38.3%) were educated beyond middle school. All the patients were males. 33 patients were brought by their family members, 22 patients were referred from other departments of the hospital or from other hospitals and 5 patients came directly to the deaddiction centre. Ten patients refused to take disulfiram.

A detailed initial assessment using a semi-structured proforma was done after detoxification and before group therapy sessions. Information was gathered from the patient and a key informant. Sociodemographic details included marital status, education, occupation, employment and socio-economic status (Kuppuswamy, 1976). Details were obtained regarding the use of alcohol, including abstinence and treatment in the past. Family history of alcoholism, suicide, and any other mental illness were recorded. Short Alcohol Dependence Data (SADD) Questionnaire was used to measure the severity of dependence (Davidson and Raistrick, 1986). The SADD questionnaire measures both physiological and behavioural features of dependence. The questionnaire consists of fifteen questions and are rated on a four point scale. The Alcohol Problem Questionnaire (APQ) was used to measure alcohol related problems. There are forty four questions with yes or no replies. All questions apply to a six month period prior to the interview (Drummond, 1990). The questionnaires were administered in a one to one interview situation to avoid questions being misinterpreted. All the patients were screened for cognitive disturbances by the Mini-mental state examination (Folstein et al., 1975) and none had significant cognitive impairment.

The outcome evaluation was done after a period of 12 to 15 months. Of the initial sample of 60, 8 patients continued to attend the follow up clinic regularly for 1 year. Letters were sent to the remaining patients and their relatives. 28 patients came to the hospital in response to letters. The remaining 24 patients were visited at their homes. The patient and spouse or a key relative were interviewed for the final assessment. Information on alcohol use, dependence features and alcohol related problems were obtained. The Short Alcohol Dependence Data Questionnaire and the Alcohol Problem Questionnaire were administered to measure alcohol related problems. The number of months, the patients attended follow up clinic to collect disulfiram was found out from the case records. The outcome was classified into 4 groups, based upon proposals by Heather and Tebut (1989).

I. Abstinent
- Complete abstinence from alcohol or not more than 1 slip or drinking episode per month.
- No problems in the family, social and occupational areas due to alcohol i.e. APQ score less than 5.

II. Non problem drinker
- Not more than 2 drinking episodes per week.
- No evidence of dependence.
- No problems in the family, social and occupational areas due to alcohol i.e. APQ score less than 5.

III. Drinking but improved
- Drinking with evidence of dependence.
- Reduction of at least 50% in the APQ score from the baseline measurement.
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IV. Unimproved
- Drinking with evidence of dependence.
- No significant change in APQ score (less than 50%).
- Need for admission.
- Died due to alcohol related problems.

"Abstinent" and "non problem drinker" groups were considered as patients with favourable outcome whereas, "drinking but improved" and "unimproved" groups as unfavourable outcome. Chi square test was used to test the significance of difference between proportions and 't' test to test the significance of difference between means. The relationship between the duration of disulfiram use and outcome was determined using chi square test for trend. The chi square test for trend yields a test statistic from chi square distribution with one degree of freedom rather than K-1 degree of freedom for the usual chi square test (Altman, 1990). The patients were divided into 4 ordered categories depending upon the duration of disulfiram use.

RESULTS

At the end of one year, 9 patients continued to attend the follow up clinic. 31 patients attended for a duration of less than three months while 10 attended between three to six months. 10 patients after a visit or two did not attend the follow up clinic. 36% of the patients showed favourable outcome which included abstinent and non problem drinkers group. 28.3% were in the drinking but improved group. 35.1% patients were in the unimproved group which included 3 patients who were readmitted during the follow up period. In tables 1 and 2 favourable outcome group (abstinent and non problem drinkers) is compared with unfavourable outcome group (drinking but improved and unimproved group) with regard to 12 base line variables. None of those socio-demographic and drinking variables could differentiate the two groups. The only treatment factor studied was the duration of disulfiram use. All the 10 patients who refused disulfiram had unfavourable outcome. All the 9 patients who continued disulfiram for more than 6 months had favourable outcome. A highly significant association between duration of disulfiram use and a favourable outcome was observed (Table 3).
DISCUSSION

The important finding at the end of one year is that definite improvement was observed in 32.5% of the patients. 35% of the patients had shown some improvement in social and occupational functioning despite continuing alcohol on a regular basis. 32.5% of the patients have not shown any significant change during this follow up period. Reasonable conclusions regarding treatment efficacy can be made from this study because of its prospective design, adequate follow up period, well defined and multiple indicators of outcome and reliable data gathering method.

In our study, information about all the sixty patients could be obtained at the end of one year. Effective tracing techniques and low attrition are especially important, since high rates of loss of clients could seriously bias the findings of research (Vanicelli et al., 1976). The outcome was classified into four well defined categories using multiple indicators.

Understanding of the mechanisms behind the successful outcome of the treatment for alcohol dependence is still incomplete. Various sociodemographic and drinking variables have been studied. Older age, lesser duration of drinking, social stability, abstinence in the past, less severe alcohol related problems and better initial level of functioning have been identified by various researchers as predicting good outcome (Polich et al., 1980; Elal Lawrence et al., 1986; Sannibale, 1989). In India, Desai et al. (1993) found that duration of dependence and the number of treatment related abstinence periods were the best predictors. Marital status, post treatment stress score and age at onset of dependence were good predictors. But Gibbs and Flanagan (1977) in their review of 45 published articles on prediction of outcome could not find any stable general predictor. Other recent studies also came to the same conclusion (Schuckit et al., 1986; Edward et al., 1988). Though our study did identify the unfavourable outcome group to have a higher family history of alcoholism and lower proportion of abstinence in the past, this did not reach statistical significance. Our study could not identify any of the pretreatment variables as significantly related to outcome.

The duration of disulfiram use was the only treatment variable studied. The duration of disulfiram was found to be strongly associated with a favourable outcome (p < 0.001). This indicates that longer the duration of disulfiram use, better the chances of a favourable outcome at the end of one year. This is possibly explained on the basis of better motivation, which is pointed out as an important factor behind good outcome (Fuller, 1989). Motivation was not evaluated in our study initially for the reason that it fluctuates over a period of time. Further those who came regularly to collect disulfiram also had an opportunity to meet the team member once in fifteen days to discuss about their problem. In India disulfiram is a popular treatment modality for alcohol dependence. The length of treatment with disulfiram is an important issue and practice varies widely. It ranges from intermittent use for short periods in high risk situations to continued use for more than 2 years (Brewer, 1992). Ojenhagen et al. (1991) gives evidence that continued use of aversive drugs after the first 6 months is critical for a favourable outcome in the treatment of alcohol dependence. Our study gives similar findings. It appears that in our population using a pharmacological intervention always enhances the motivation of the individual and makes the hospital visit more purposeful and meaningful for the individual.

The main shortcomings of the present study are the lack of a control group and random assignment. So the results cannot be generalised. Further no comparison was attempted with an outpatient group. This is because majority of patients would either get admitted or drop out even before detoxification is completed. Since multiple treatment modalities were employed in the present study, results do not prove the efficacy of any specific treatment method. Since the study included only patients who completed four weeks of inpatient treatment programme, the study might have included only patients with better motivation. The definite method of determining the efficacy of a particular treatment is the randomised, controlled clinical trial, which is extremely difficult to undertake in alcohol research. Saunders (1989) points out that studies without a controlled design and random assignment can also point to a promising treatment and steps to recovery. Although it is suggested that out-patient treatment is as good as inpatient treatment, it does not seem to be
practical in the Indian situation. Initially external control is necessary to help the patients keep away from alcohol which the hospital seems to provide them. Further the family members of the patients also need a respite for some time. In our experience the majority of patients who are offered treatment on an outpatient basis invariably get admitted in few weeks time if they continued to attend the centre regularly. Future research should include a large sample and a control group with periodic evaluation to arrive at any reasonable conclusion regarding treatment efficacy.

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