



KNOWLEDGE, ATTITUDE, PRACTICES OF DISULFIRAM AMONGST RELATIVES OF PATIENT WITH ALCOHOL USE DISORDER.

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ABSTRACT KAP (Knowledge, Attitude and Practice) studies are highly focused evaluations to measure changes in response to a specific intervention, usually outreach, demonstration or education. This study was conducted to assess KAP of Disulfiram amongst relatives of patients suffering from alcohol use disorder. Relatives of 100 patients diagnosed as alcohol use disorder were interviewed using a self-designed semi structured proforma. Alcohol use was documented to ascertain the pattern and dependence. On asking if "Heard about disulfiram" 38 respondents stated yes whereas 62 said no. 36% said that they have used disulfiram. 32% reported good experience. 35% showed improved quality of life and achieved abstinence from alcohol. The present study demonstrated poor knowledge among relatives, but good attitudes toward use of disulfiram. The results suggest the need to implement an intervention strategy that reflects specific local circumstances and plan activities that are suited to the population involved.

KEYWORDS : Disulfiram, Alcohol Use Disorder, Attitude.

Introduction

Disulfiram is one of the most important drugs used in the management of alcohol use disorders. It is of significance as a treatment modality especially in low and middle-income countries like India, as it is a cheaper pharmacological option compared to other medications like naltrexone and acamprostate (Garbutt JC, 1999).

Disulfiram, a deterrent agent, was approved for the treatment of alcoholism nearly 50 years ago (Hald and Jacobsen, 1948). Its use, however, has not been widespread due to lack of adequate research. Also, there is a lack of clear guidelines for the use of this medication, alone or in combination with specific psychosocial treatments, that substantially limits its clinical value in the pharmacotherapy for treatment of alcohol dependence.

Disulfiram alter the body's response to alcohol, making its ingestion unpleasant. The Disulfiram Alcohol Reaction [DAR] is an aversive reaction that varies in intensity both with the dose of disulfiram and the amount of alcohol consumed. However, there is limited evidence for the efficacy of disulfiram in the treatment of alcoholism. (Fuller, 1986) Disulfiram is started after taking informed consent from patient and their relatives as it requires regular supervision, which is possible in the usual family setting in India. However, surreptitious administration of disulfiram by family members to unsuspecting patients has also been a matter of concern. In practice, it is not uncommon to come across women giving disulfiram to their husbands abusing alcohol, without their knowledge and precipitating DAR in them. Disulfiram, commonly referred to as 'reaction ki dawai' (medication causing reaction), is thereafter given to the patient surreptitiously mixed with food or fluids. The patient gets a DAR after consuming alcohol and quits alcohol in many cases. Giving disulfiram in such a manner may possibly help some alcohol use disorder patients, especially those who are poorly motivated to quit drinking (Manjunatha N, 2010). As these practices are prevalent local knowledge and practice related to use of disulfiram is important for the implementation of appropriate, sustainable, and effective interventions in alcohol dependence. There is paucity of data on KAP studies of disulfiram use in alcohol dependence. So, in order to create a synergy between treating psychiatrist and relative's efforts to control alcohol dependence there is an urgent need to determine the people's knowledge, attitude, and practice of disulfiram use.

Aim

Relatives perceptions, beliefs, and attitudes about use and benefit of disulfiram are often overlooked in treatment of alcohol dependence.

This study was conducted to understand these issues, which can be an important step towards developing strategies, aimed at treating alcohol dependence.

Material and Methods

This is a cross-sectional, Observational study carried out in a tertiary care teaching public sector hospital from 1st January 2015 to 31st December 2015. This study included total of 100 patients and their accompanying relatives attending the outpatient department. The patients diagnosed as Alcohol Use Disorder as per Diagnostic and Statistical Manual-5 (DSM-5) where interviewed after the patients and/or relatives were willing to participate and giving informed consent for the study. After taking informed consent and explaining the aims and objectives of the study to the patient following data was collected by self-designed semi-structured proforma, the demographic profile, phenomenology of Alcohol dependence and questions pertaining to practical use of disulfiram.

Statistical analysis

The data obtained was entered MS Excel sheet and analysis was done with the SPSS Version 20. Mean and standard deviation was calculated for all scores. The frequency in percentages was calculated for each parameter.

Results

The mean age of total sample (n= 100) was 38.73 ± 8.846 in range of 21-65yrs. There were 99 males and 1 female. Hindu was predominant religion with 85% followed by Muslim 12% respondents. The highest number of people were in service (48%), married (78%) and belonged to a joint family (78%). Maximum number of participants belonged to Lower middle class of socioeconomic strata. The sociodemographic and household characteristics of the study population are presented in Table 1.

| CHARACTERISTICS | FREQUENCY (%) |
|-----------------|---------------|
| Gender | |
| Male | 99% |
| Female | 1% |
| Religion | |
| Hindu | 85% |
| Muslim | 12% |
| Christian | 2% |

| | |
|-----------------------------|-----|
| Buddhist | 1% |
| Occupation | |
| Job | 48% |
| Self employed | 38% |
| Unemployed | 13% |
| Housewife | 1% |
| Marital Status | |
| Married | 78% |
| Single | 18% |
| Divorced | 3% |
| Widow | 1% |
| Family type | |
| Joint | 68% |
| Nuclear | 32% |
| Socioeconomic status | |
| Upper | 4% |
| Upper Middle | 10% |
| Middle | 23% |
| Lower Middle | 49% |
| Lower | 14% |

The details of alcohol use were also documented to know the dependence pattern. The mean duration of alcohol use was 148.97 ± 98.78 in the range of 4-600 months. The predominant type of alcohol consumed was country liquor (59%) followed by whisky (27%) and Taadi (14%). Commonly observed frequency of alcohol consumption was daily (87%), weekly (12%), monthly (1%). Also noted were other substance used amongst which highest used was tobacco (68%), nil 26%, cannabis (4%), both cannabis and tobacco (2%). The mean amount spent daily on alcohol was 287.75 ± 563.71 in range of Rs.10-Rs.5000.72% participants believed that alcohol use is a medical illness while 28% did not.

On asking about their belief in possibility to quit alcohol 88% said yes, 10% said no and 2% don't know. On asking if "Heard about disulfiram" 38 respondents stated yes whereas 62 said no. Only 34 said that they had heard about others benefiting from disulfiram where 66 said they had not.35 respondents had previously heard about disulfiram- ethanol reaction while 65 had not.

| Knowledge about disulfiram | |
|---|---------------|
| VARIABLES | FREQUENCY (%) |
| Heard about disulfiram | |
| Yes | 38% |
| No | 62% |
| Heard about anyone benefitted from disulfiram | |
| Yes | 34% |
| No | 66% |
| Heard about disulfiram- ethanol reaction | |
| Yes | 35% |
| No | 65% |

36 participants had their relatives using tablet disulfiram. The most common dosage used was 500mg (24%). The mean duration since on disulfiram was 11.11 ± 21.42 in range of 1-120 months.

| Practice of disulfiram | |
|---------------------------------------|---------------|
| VARIABLES | FREQUENCY (%) |
| Relatives whose patient was using DSF | |
| Yes | 36% |
| No | 64% |
| Daily dose | |
| 250mg | 8 |
| 500mg | 24 |
| 750mg | 2 |
| 1000mg | 2 |

40 % respondents said yes for usefulness of drug causing unpleasant reaction in alcohol use treatment.32% stated that they had good experience when their patient used disulfiram. Out of 36 participants who used Disulfiram 20 did not find a negative experience on consuming alcohol with disulfiram while 10 reported vomiting.35 said disulfiram has improved quality of life and abstinence from alcohol in their patients. Only 8 participants had heard of disulfiram as long-term therapy.35 respondents said that disulfiram is a cost-effective treatment.

| Attitudes towards disulfiram | |
|---|---------------|
| VARIABLES | FREQUENCY (%) |
| Usefulness of drug causing unpleasant reaction in treatment of alcohol dependence | |
| Yes | 40 |
| No | 48 |
| Don't know | 12 |
| Experience with disulfiram with regards to their patients | |
| Good | 32 |
| Bad | 4 |
| Not applicable | 68 |
| Negative experience while consuming alcohol with disulfiram | |
| Nil | 20 |
| Vomit | 10 |
| Headache | 4 |
| Rash | 2 |
| Has DSF improved Quality of Life | |
| Yes | 35 |
| No | 1 |
| Has DSF improved abstinence | |
| Yes | 35 |
| No | 1 |
| Heard of DSF as long term therapy | |
| Yes | 8 |
| No | 28 |
| Is DSF cost effective treatment | |
| Yes | 35 |
| No | 1 |

Discussion

To our best knowledge, this was the first study that examined knowledge and attitudes towards use of disulfiram amongst relatives of patients diagnosed with alcohol use disorder in India. Although, the present study demonstrated poor knowledge among relatives, they hold good attitudes toward use of disulfiram in alcohol dependence. Some of the earlier papers on disulfiram also suggest that a degree of supervision or family involvement may be useful (Fox R,1958). Gerrein et al. first published a study which investigated objectively the relationship between supervision and outcome (Gerrein, 1973). They found significant improvements in outcome when disulfiram was supervised during daily out-patient attendance compared with unsupervised disulfiram. Hence the role of relatives in treatment with disulfiram is crucial. Out of 100 relatives interviewed only 38 had heard about disulfiram and held good knowledge about it. Only 36 patients had their relatives using disulfiram. They were using a dose of 500mg and hence only few noted adverse effects of alcohol disulfiram reaction. Brewer et al found that dose of 200 mg is insufficient to produce more than a mildly unpleasant reaction with alcohol. This has presumably contributed to the extreme rarity of serious alcohol disulfiram reactions reported (Brewer, 1993) This further points to unawareness amongst population about this treatment option. However, 35 out of these 36 mentioned that they believed disulfiram was a good drug as it improved abstinence, improved quality of life and was cost effective as well. This attitude is believed to be an excessively psychological approach in practice of deaddiction (Caplehorn,1995). However, this study was marred by scientific limitations in the fact that it was done in a circumscribed sample and that the findings cannot be generalized to large populations. There is need for further studies in diverse populations to give impetus to the findings of our studies.

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