Original Research Article

Depression in "Alcohol Dependence Syndrome'': Undiagnosed comorbidity-A cross - sectional study in tertiary care general hospital in Delhi- NCR

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Abstract

This study was done to know and evaluate the presence of Depressive disorder in diagnosed case of alcohol dependence syndrome. A total of 60 cases who met the "ICD- 10 criteria'' for Alcohol dependence syndrome and acontrol group of 60 subjects from the general population were assessed. This studyfocused on determining the prevalence of Depressive disorder among alcohol-dependentsubjects. A standardized diagnostic tool was used for making the psychiatric diagnosis using ICD-10 DCR. In this study,the frequency of occurrence of depressive disorders in alcohol dependent subjects was: Major Depressive Episode – 15% , Dysthymia –5% .

Key words: alcohol,dependence

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Introduction

World Health organization mentioned that "Alcohol is a psychoactive substance with dependence-producing properties that has been widely used in many cultures for centuries. The harmful use of alcohol causes a large disease, social and economic burden in societies and alsoalcohol consumption is a causal factor in more than 200 disease and injury conditions. Drinking alcohol is associated with a risk of developing health problems such as mental and behavioral disorders, including alcohol dependence, major noncommunicable diseases such as liver cirrhosis, some cancers and cardiovascular diseases, as well as injuries resulting from violence and road clashes and collisions''[1]. Alvaro Castillo-Carniglia et al, concluded in their article "Alcohol use disorder is a major contributor to the morbidity and mortality burden worldwide, overall, this disorder co-occurs with a wide range of other psychiatric disorders, especially those disorders involving substance use and violent or aggressive behavior. The causal pathways between alcohol use disorder and other psychiatric disorders are heterogeneous. Hypotheses explaining these relationships include reciprocal direct causal associations, shared genetic and environmental causes, and shared psychopathological characteristics of broader diagnostic entities (eg, externalising disorders)''[2]. An estimated 95 million people live with alcohol dependence globally[6].

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Grant BFet al, .CargiuloT, Rehm J. &Whiteford HA said that "Alcohol use disorders are highly disabling, associated with many physical and psychiatric co-morbidities[3,7,8] and are responsible for 10% of the burden of disease related to substance use and mental disorders''[9]. Marc A.Schuckitwrote in a chapter 'Alcohol-Related Disorders' that " Up to 80% of men and women report temporary symptoms of sadness or anxiety during the course of their disorder .Out of these, in at least 40%, these syndromes become intense and persistent enough to meet criteria for major psychiatric conditions such as major depressive episodes, panic disorders, etc[16]. Alcohol use disorders have special relevance to psychiatry. Alcohol is a chronic drug that causes both acute and chronic changes in almost all neurochemical systems, with the result that heavy drinking can cause temporary psychological symptoms including depression, anxiety and psychosis. Several pre-existing psychiatric diagnosisincluding antisocial personality, bipolar disorder and schizophrenic disorders, increase the risk for later alcohol use disorders''[16]. Grant BF et al,Melchior Met al ,Sorensen Tet al & Preuss UW et al found that "Therefore to use a diagnosis to indicate prognosis and guide treatment, clinicians need to distinguish between temporary substance related psychopathology likely to disappear after abstinence versus independent psychiatric syndromes that may require long term medication. Psychiatric comorbidity is the presence, simultaneously or in sequence, of more than one disorder within an individual within a certain time period. The prevalence of most mood, anxiety, substance, and thought disorders is higher in people with alcohol use disorder than in the general population[17,18,19], although the magnitude of the correlation varies acrossdisorders''[20]. "Many studies have focused on identifying both good and bad prognostic indicators in the course of major depressive disorder. Mild episodes, the absence of psychotic symptoms, and a short hospital stay are good prognostic indicators. Psychosocial indicators of a good course include a history of solid friendships during adolescence, stable family functioning, and generally sound social functioning for the 5 years preceding the illness. Additional good prognostic signs are the absence of a comorbid psychiatric disorder and of a personality disorder, no more than one previous hospitalization for major

depressive disorder, and an advanced age of onset. The possibility of a poor prognosis is increased by coexisting dysthymic disorder, abuse of alcohol and other substances, anxiety disorder symptoms, and a history of more than one previous depressive episode. Men are more likely than women to experience a chronically impaired course'' mentioned in Kaplan &Sadock's, behavioral sciences/clinical psychiatry, eleventh edition. It has been asserted that addiction is a "brain disease," that the critical processes that transform voluntary drug-using behavior to compulsive drug use are changes in the structure and neurochemistry of the brain of the drug user. Sufficient evidence now indicates that such changes in relevant parts of the brain do occur. The perplexing and unanswered question is whether these changes are both necessary and sufficient to account for the drug-using behavior. Many argue that they are not, that the capacity of drug-dependent individuals to modify their drug-using behavior in response to positive reinforcers or aversive contingencies indicates that the nature of addiction is more complex and requires the interaction of multiple factors.

A study done by Lynn Boschloo et al shows that "alcohol dependence is highly prevalent among anxious and/or depressed persons. In persons with both lifetime anxiety and depressive disorders the prevalence of lifetime alcohol dependence was even as high as 20.3% compared with 5.5% in controls. In contrast, alcohol abuse was not more prevalent among anxious and depressed persons than in controls. The results further show that male gender, vulnerability (family history, personality and social factors) and addiction-related characteristics, more than anxiety/depression-related characteristics, are important risk indicators for comorbid alcohol dependence. In addition, comorbid alcohol dependence was more likely to be secondary than primary to anxiety or depressive disorders. Considerable variation in characteristics exists in persons with primary alcohol dependence (more often male and more extravert) versus secondary alcohol dependence (more neurotic, more often single and more lonely). However, characteristics identifyingpersons with comorbid alcohol dependence may varydepending on the temporal sequencing of disorders, whichemphasizes the importance to consider primary and secondaryalcohol dependence separately. This knowledge may helpto identify those anxious and/or depressed patients in clinicalpractice who are likely to have or to develop alcoholdependence and offers potential for more suitable therapyfor those suffering from this severely impairing comorbidcondition''[36].

Aim& Objective

A study of "comorbidDepressive disorders in patients with Alcohol dependencesyndrome".

Study-design

This was a cross-sectional study and done over a duration of 6 months. Patients between age 21 to 60 years visiting the Psychiatry Outpatient department (OPD) in Sharda Hospital, Greater Noida ,patientmet the ICD -10 criteria for Alcohol dependence syndrome were selected as study sample.

Materials and Methods

The study was cross-sectional in nature and conducted over a period of 6 months. Patients between age 21 to 60 years visiting the Psychiatry Outpatient department (OPD) in Sharda Hospital, Greater Noida, who met the ICD 10 criteria for Alcohol dependence syndrome were selected as study sample. All patients were informed and explained the details of the study. If they agreed a written informed consent was obtained from the patient and their attendant. A specially designed semi-structured Performa was used to obtain information regarding socio-demographic profile, age of onset of alcohol consumption and duration of alcohol consumption of the patient. Mini international neuropsychiatric interview scale English version 5.0.0 was used to assess the patient for psychiatric comorbidity. A total of 60 cases who met the ICD 10 criteria for Alcohol dependence syndrome and a matched control group of 60 subjects from the general population were assessed for the study. Data generated was analyzed using IBM SPSS Statistics Subscription software.

Results

Out of the 60 alcohol dependent subjects mostly were from the age group of 31-40years (41.7%) then by 41 50yrs (33.3%) [Table-1] .86.7% of them were married and 13.3% were unmarried [Table-2]. 55% of them had secondary education,21.7 %were graduates,20% had primary education and 3.3% were illiterate [Table-3]. 50% subjects started using alcohol between the age group of 21-30years, 43% started using alcohol when they were less than 20years of age,3.3% of the subjects started using alcohol between31-40years of age and 3.3% started using alcohol after the age of 40years [Table-4]. 38.3% of the subjects had a duration of >20years of alcohol use,28.3% of the subjects had a duration of 16-20years of alcohol use ,20% of the subjects had a duration of 11-15years of alcoho luse,10% of the patients had a duration 6-10years of alcohol use and 3.3% of the patients were using it for <5years [Table-5].The frequency of development of different types of comorbid psychiatric illnesses in alcohol dependent subjects was as follows – Major Depressive Episode – 15% ,Dysthymia – 5% [Table 6].

Table -1: Age Distribution (years)

Age	Frequency	Percent
21 - 30	8	13.3
31 - 40	25	41.7
41 - 50	20	33.3
51- 60	5	8.3
> 61	2	3.3
Total	60	100

Table 2: Marital Status

	Frequency	Percent
Unmarried	8	13.3
Married	52	86.7
Total	60	100.0

Table 3: Education

	Frequency	Percent
Illiterate	2	3.3
Class 1-5	12	20.0
Class 6-12	33	55.0
Graduate and above	13	21.7
Total	60	100

Table 4: Age of Onset of Alcohol Consumption (in years)

	Frequency	Percent
< or = 20	26	43.3
21 – 30	30	50.0
31 – 40	2	3.3
> 40	2	3.3
Total	60	100

Table 5: Duration Of Alcohol Consumption (in years)

	Frequency	Percent
0 – 5	2	3.3
6 – 10	6	10.0
11 – 15	12	20.0
16 – 20	17	28.3
> 20	23	38.3
Total	60	100.0

Table 6: Comparison of psychiatric comorbidities in between the alcohol dependent subjects and The control group

	Alcohol Dependent Subjects N (%)	Control Group N (%)	$\chi 2$ value	p value	Remarks
Major Depressive Episode	9(15)	2(3.33)	4.904	0.027	p value is significant
Dysthymia	3(5)	0	-	-	-
Total	12(20)	2(3.33)			

Remarks –" p value is significant at $p < 0.05$''

Discussion

In presentstudy, the frequency of occurrence of depressive disorders in diagnosed case of alcohol dependence syndrome was Major Depressive Episode – 9 cases, Dysthymia – 3 cases. It means that15% of the patientswere diagnosed with Major Depressive Episode, and 5% were diagnosed with Dysthymia. "A higher prevalence of depression in patients of alcohol dependence syndrome'' has earlier been reported by "Singh et al. [22] (26%), Cadoret et al[23] (39%), Alec et al90 (33%), Kakunje[24](19%), Shakya et. Al[25] (18.3%) and Vohra et al[26](52.1%)'' . All these studies have some differences in the result when compare to this study due to some used different methodology i.e., different sample size and thetools. The prevalence of depressive disorder in diagnosed case of alcohol dependence is of concern to doctors and researchers as well. Alcohol dependence syndrome often occur with Depression, if not treated properly or at right time they can make each other more worse and more problematic. The use of alcohol can cause prolonged hospital stay .it can leads to frequent relapse. Depression may lead to excessive consumption of alcohol .Person with depression think that if he will take alcohol then he will feel good and happy, so on this way person starts taking on daily basis and sometime starts day with consumption of alcohol.R. Kathryn McHughin his article mentioned that "People with AUD have a heightened risk for depressive disorders, which are the most common co-occurring psychiatric disorders for this population. AUD and depressive disorders appear to share some behavioral, genetic, and environmental risk factors, yet these shared risks remain poorly understood. Diagnosis and treatment of the commonly co-occurring AUD and depressive disorders have many challenges. Diagnosis is particularly challenging because of overlapping symptoms, such as the depressant effects of alcohol, and because of features that are common to both alcohol withdrawal and depressive disorders, such as insomnia and psychomotor agitation. The DSM-5 distinguishes a substance-induced disorder from a primary depressive disorder based on whether "the substance is judged to be etiologically related to the symptoms." Accordingly, any diagnosis of depression during active periods of drinking or during acute alcohol withdrawal should be made provisionally. Attempts to diagnose depression should focus on identifying periods of depression outside periods of drinking or withdrawal and should use collateral information (e.g., reports from family members or significant others) when possible. If depressive symptoms persist after a period of abstinence—4 weeks is the typical recommendation—a diagnosis of an independent (i.e., not substance-induced) depressive disorder can be made with more confidence''[30,31].

Adriana Farré et al found in their study that "A total of 80 patients were included (47 Primary MD and 33 AI-MD). The AI-MD group presented more medical comorbidities and less family history of depression. There were differences in traumatic life events, with higher scores in the AI-MD (14.21 ± 11.35 vs. 9.30 ± 7.38; $p = 0.021$). DSM-5 criteria were different between groups with higher prevalence of weight changes and less anhedonia, difficulties in concentration and suicidal thoughts in the AI-MD. None of the genetic variants reached significance beyond multiple testing thresholds; however, some suggestive variants were observed. (Primary Major Depression (Primary MD) and Alcohol Induced MD (AI-MD)''[32]. Ping Yang el al, "The close relationship between psychiatric disorders (e.g., Schizophrenia, mood disorders, PDs) and AUDs suggests that psychiatric disorders are predisposing factors for AUDs. In this review, we investigated three comorbid disorders with AUDs, focusing on cognitive function in these disorders and neural imaging studies. We found that memory deficits, cognitive control, negative emotion, impulsivity, and affective instability may increase an individual's vulnerability to AUDs. This review may indicate the neural basis and clinical subdivisions of AUDs, as well as suggest new approaches for the preclinical treatment of AUDs"[33]. Helen M. Pettinati et al, mentioned that "There are real concerns about medication interactions with alcohol in patients who were still drinking. Also, depressive symptoms can be brought on by excessive alcohol use, which makes it difficult to separate a substance-induced depression from an independent disorder of clinical depression. Traditionally, placing patients in 28-day inpatient settings, which helped patients abstain from alcohol, easily permitted an independent depressive disorder to be identified and treated. This practice is much less of an option in today's US health care environment, and this has challenged us to rethink our clinical management of these patients. Empirical data that support effective treatments for co-occurring depression and alcohol dependence are long overdue. Comorbid prevalence rates are formidable, and numerous reports describe patients with comorbid depression and alcohol dependence as clinically more severely ill and more difficult to keep well than patients who are either depressed or alcohol-dependent. Positive outcomes may depend on both the type and timing of the medication and psychosocial interventions needed to treat both disorders to symptom remission, as well as a solid doctor-patient relationship, attention to treatment compliance, and a commitment to treat both the

alcohol dependence and the mood disorder. While it seems logical to prescribe antidepressants for patients who are depressed, some alcohol-dependent patients—as well as some clinicians who treat them—are unwilling to use a medication. Fortunately, bias is fading as scientists learn more about treating the addicted brain with certain medications and correcting the neurobiology of addiction. Over the past 20 years, results from the majority of well-controlled trials have showed that antidepressants reduced depressive symptoms in patients with depression and alcohol dependence. However, in most of the trials, these medications had virtually no effect on reducing excessive drinking.Integrated psychosocial outpatient treatment programs and the ability to treat alcohol and depression simultaneously have reinforced the need to revisit the traditional management of comorbid major depression and alcohol dependence more formally''[35]. Alena Becker discussed in his article that "Although there is significant knowledge of the environmental and neurobiological factors involved in depression and alcohol dependence, only a few studies have translated these empirical findings into a better understanding and treatment of comorbid patients. The planned project is set-up to transfer previous research about the reward circuit and default mode network underlying alcohol dependence and depression to achieve a better understanding of neural signatures characterizing their comorbidity. By means of diverse experimental paradigms allowing a comprehensive characterization of reward and default mode network activity and connectivity, we are planning to assess distinct and common mechanisms underlying comorbid alcohol and depressed patients. In addition, the neurobiological results will be used to test whether a brief psychotherapeutic intervention program is able to positively influence the identified pathomechanisms. By gaining a better understanding of diverse phenotypes and their underlying neurobiological signatures, it might be possible to improve clinical outcomes by offering specific types of psychotherapy. Furthermore, we should find support for our hypotheses that established behavioral and mindfulness based intervention programs specifically alter pathological neurobiological functions. By this, we will be able to identify neurobiological markers of therapy efficiency. The prediction of psychotherapeutic success based on neurobiological signatures will help to guide the selection of specific therapeutic options. Ultimately, by means of identifying and validating the use of objective, biological indicators associated with core mechanisms of mental disorders, advances in personalized medicine may be achieved''[36]. Therefore, this study will give better insight into the treatment and outcome of alcohol dependence as well as prevention of alcohol dependence. The need to distinguish the alcohol dependence patients with and without psychiatricmorbidity was recognized a long ago[28]. In various studies it has been reported that alcoholdependence along with comorbid psychiatric illness account for poor prognosis of suchpatients[24,27,28].

Mary W. Kuria et al found "The prevalence of depression among alcohol-dependent persons is high (63.8%) with a significant association between depression and the mean AUDIT score. At posttest, depressed participants had a statistically significant craving for alcohol"[29]. D. S. Hasin et al & E. J. Khantzian et al study found that "The need for screening for depression in alcohol-dependent persons and continuous monitoring for it during treatment of alcohol dependence cannot be overemphasized. This is because untreated persistent depression may reduce the resolve to refrain from alcohol, or alternatively depression may lead to self-medication with alcohol"[5, 6]. This study may able to throw light on why relapse are high in alocoholics[37,38].

Limitations of the Study

The sample size was less.Results may not be generalized being a hospital based study .TheResults of present study may not be generalized across both genders.

Recommendations

A study on larger sample size .Efforts should be made to include more females in the sample. Use of other psychoactive substances should be ruled out with the help of laboratory investigations.

Summary and Conclusions

This study was done to know and evaluate the presence of Depressive disorder in diagnosed case of alcohol dependence syndrome. A total of 60 cases who met the "ICD- 10 criteria'' for Alcohol dependence syndrome and acontrol group of 60 subjects from the general population were assessed. This studyfocused on determining the prevalence of Depressive disorder among alcohol-dependentsubjects. A standardized diagnostic tool was used for making the psychiatric diagnosis using ICD-10 DCR. In this study,the frequency of occurrence of depressive disorders in alcohol dependent subjects was: Major Depressive Episode – 15% , Dysthymia –5% .

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