RESEARCH PAPER | Medical Science | Volume : 4 | Issue : 4 | Apr 2014 | ISSN - 2249-555X

Alcohol use, Abuse, Depression and Anxiety : The Clinical Links

KEYWORDS: Alcohol Dependence, Alcohol Use, Abuse, Depression, Anxiety Disorders

Anup Bharati
Assistant Professor, Department of Psychiatry, Lokmanya Tilak Municipal Medical College, Mumbai

*** Avinash De Sousa**
Research Associate, Department of Psychiatry, Lokmanya Tilak Municipal Medical College, Mumbai
* Corresponding Author

ABSTRACT *Alcohol dependence, anxiety disorders and major depression commonly occur together; however, few studies have assessed prospectively the magnitude of the risk that one disorder imparts on the subsequent occurrence of the other. The following articles looks at certain important clinical factors in this association while trying to point out the reasons for the linkage between these disorders and how their treatments and management are interdependent. It also looks at comorbidity studies and outcome factors based on management.*

INTRODUCTION

The recent large-scale epidemiologic study of psychopathology in the United States indicates that, while nearly half of the population will experience a major psychiatric illness at some point over their lifetime, the majority of these individuals will also meet diagnostic criteria for at least one additional disorder. In addition to its high frequency, psychiatric comorbidity has been shown to have important implications for patient functioning and prognosis. Comorbid conditions typically follow a more chronic and severe course than single disorders, and they are less amenable to treatment. Individuals with two or more diagnoses are also significantly more likely to experience severe impairment in important life domains such as social and occupational functioning. For these reasons, it is not surprising that comorbidity has been referred to as one of the most important challenges in the field of mental health. Understanding the nature of these relationships may have important implications for improving nosology, as well as for developing better models of prevention and treatment. Although many psychiatric disorders co-occur with great frequency, few conditions have been more widely or consistently implicated in comorbid relationships than alcoholism. Alcoholism is perhaps most strongly associated with antisocial personality disorder and drug abuse, but its relationship to other forms of psychopathology has become increasingly evident. In particular, investigations of patient samples indicate a strong co-occurrence of alcoholism with diverse forms of anxiety and depressive disorders. Results from community surveys and epidemiologic samples indicate that substantial comorbidity also exists for these disorders in the general population. These latter findings are particularly meaningful considering that alcoholism, anxiety, and depressive disorders are also the most common psychiatric syndromes in community surveys. The high co-occurrence of these syndromes, therefore, represents a significant clinical and public health issue that is likely to affect a substantial proportion of the general population.

ALCOHOL DEPENDENCE AND DEPRESSION

According to the DSM-IV-TR, a diagnosis of mood disorder cannot be made if the cause is believed to be due to "the direct physiological effects of a substance"; when a syndrome resembling major depression is believed to be caused immediately by substance abuse or by an adverse drug reaction, it is referred to as, "substance-induced mood disturbance". Alcoholism or excessive alcohol consumption significantly increases the risk of developing major depression.[1-3] Like alcohol, the benzodiazepines are central nervous system depressants; this class of medication is commonly used to treat insomnia, anxiety, and muscular spasms. Similar to alcohol, benzodiazepines increase the risk of developing major depression. This increased risk may be due in part to the effects of drugs on neurochemistry, such as decreased levels of serotonin and norepinephrine.[4]

Two out of every three "alcoholics" meet criteria for another major psychiatric disorder at some time in their lives.[5-7] The majority of these additional diagnoses relate to antisocial personality disorder and other drug dependencies, but the rates of depressive and anxiety syndromes also appear to be higher than expected by chance alone.[8,9] Similarly, as has been discussed elsewhere, major depressive episodes observed only in the context of intoxication or withdrawal from substances of abuse are likely to clear spontaneously over time following abstinence, and there is little indication that they routinely require antidepressant medications.[8,10]

The relationship between psychopathology and addictive disorders has generated tremendous interest. Affective disorders (mainly depression) are widespread amongst people who abuse alcohol, which was reported by several studies.[11-15] The epidemiologic data as well as the data from other studies clearly states that substance abuse disorders and other psychiatric disorders co-occur more commonly than would be expected by chance.[6,16-17]

Studies have reported depression to be associated with alcoholism in the rates from 8.6 % to 71%.[13] Meyer 1986 described the possible relationships between addictive disorders and coexisting psychopathology—

a) Psychopathology may be a risk factor for addictive disorders;
b) Psychopathology may modify the course of an addictive disorder or
c) Psychiatric symptoms may emerge during the course of chronic intoxication. [18]

Authors have suggested that there may be three types of alcoholism—one occurring independent of other psychiatric illnesses and other forms occurring as part of the course of either sociopathic or unipolar affective disorder.[19-20]

An older study reported that depressive disorders in alcoholics are heterogeneous and it includes unipolar, bipolar, primary & secondary depression & depressive personality disorders.[21] According to them depression may occur before, after or concurrently with alcoholism. In their study they reported 15% of patients having alcoholism with coexisting depression while others observed that the traditional view of the depressed alcoholic using alcohol as a way of obtaining relief from depressed mood is not entirely accurate.[22] Other

Volume : 4 | Issue : 4 | Apr 2014 | ISSN - 2249-555X

researchers found that majority of patients with alcoholism & depression had a history of constant alcoholism prior to that of depression. They found that patients with alcoholism & depression were more similar to patients with depression.[11]

Research has concluded that depression in alcoholics show the same pattern of symptoms as seen in primary affective disorders & this is of two types—one which disappears within two days to a week after abstinence and the less common one, which runs the course like that of primary depressive disorder.[23-24] Though alcoholics with affective disorders may start life with a primary affective illness and later develop secondary alcoholism; in clinical practise the distinction with regard to chronology of the onset of illness is somewhat academic.[25] Once the patient with an affective disorder becomes alcoholic, the addictive process may become the more clinically dominant illness with regard to social behaviour and compliance with treatment. This may explain why the use of antidepressants and lithium in the treatment of alcoholics has been so disappointing.[26-27] Thus the distinction between primary alcoholism and alcoholism with secondary depression may not be all that clear.

ALCOHOL DEPENDENCE AND ANXIETY

Similar to the data regarding affective disorders, the literature also indicates a high prevalence of anxiety symptoms among alcohol-dependent individuals.[28-29] Some clinicians and researchers have taken these data to indicate that anxiety and alcohol use disorders might be genetically linked. Others have concluded that many individuals with major anxiety disorders might be attempting to medicate their symptoms with alcohol.[30] In several studies 80% of alcohol-dependent men admitted to ever having repetitive panic attacks in the course of withdrawal from alcohol, and 50%–67% of the alcohol dependent men had high scores on state anxiety measures, with symptoms that resembled generalized anxiety disorder and social phobia.[31] If seen only in the context of withdrawal, these and other symptoms are likely to disappear with time.[32-35] Thus, when phobic, panic-like, or other anxiety pictures are observed during acute or protracted withdrawal, it is difficult to determine from a cross-sectional evaluation whether the individual has a major anxiety disorder, with the implied lifelong course of anxiety symptoms, or whether these symptoms are likely to disappear with time.[36]

A number of investigators have reported that when alcohol and anxiety disorders are seen in the same individual, 40%–60% of subjects indicate that the anxiety disorder appeared first.[7,16,37-39] High levels of anxiety and potential misdiagnoses of lifelong anxiety disorders are likely to occur during the first two weeks of abstinence because of the acute withdrawal or abstinence syndrome.[40] These symptoms are likely to continue at a decreasing level of intensity over the subsequent months as part of protracted withdrawal.[41] High co-morbidity rates of SP are also reported in treatment-seeking alcohol-dependent individuals, among whom a multicenter study conducted in Germany, yielded an overall rate of 42% for any anxiety disorder and of 13.7% for SP.[42] Alcohol abuse is secondary to SP in the majority of patients.[43] Other anxiety disorders such as panic disorder, agoraphobia, generalized anxiety disorder, obsessive-compulsive disorder and specific phobias are commonly associated with Alcohol dependence.[44-46]

Another study indicated a higher than expected rate of anxiety symptoms (not diagnosable disorders) among alcoholics who subsequently returned to heavy drinking, but it did not show a high rate of anxiety disorders in subjects who remained abstinent.47 Even in the context of high levels of anxiety or affective symptoms soon after the beginning of treatment, these symptoms continued to improve if abstinence was maintained.13,48-50

Often persons with substance use disorders do not come to treatment because of the substance abuse problem alone; they seek relief from its associated temporary features, such as depression or anxiety.[47] The prevalence of co-morbid anxiety disorders and alcohol dependence in the general population and in clinical samples is higher than would be expected on the basis of chance alone.[45-46,51-52] The following four underlying mechanisms have been proposed to explain this frequent co-occurrence:

(1) Anxiety disorders enhance the risk of alcohol dependence;
(2) Alcohol dependence enhances the risk of anxiety disorders;
(3) Both disorders share a common etiology, with anxiety and alcohol dependence being discrete manifestations of the same disorder, which itself is caused by a 'third factor'
(4) The co-morbid condition is a distinct disorder, independent of the pure disorders. These models are not necessarily mutually exclusive.

Studies on the order of onset, most of which were performed retrospectively on co-morbid clinical samples, have revealed that anxiety disorders more often predate the onset of alcohol dependence than vice versa.[53-54] It has been suggested that the type of anxiety disorder has a critical influence on the relationship between alcohol dependence and anxiety disorders.[9] Phobic disorders (social phobia and agoraphobia) more often serve as a primary diagnosis, whereas panic disorder and generalized anxiety disorders are more often diagnosed after the onset of alcohol dependence.[55]

In addition to Genetic and Environmental factors that constitutes a common aetiology for anxiety disorder and alcohol dependence, which explained the elevated co-morbid rates (model 3), other factors which could be potential third factors like social class of origin, educational level or childhood trauma should also be considered.[56-57]

CONCLUSIONS

Further research is needed that examines the temporal ordering of alcohol dependence, anxiety and depression, and assesses the relationship between the orders of onset of both disorders and their subsequent patterns of recurrence. Researchers suggest that a hierarchy of symptoms should be established based on symptom chronology, and that the course of disease depends on which disorder was the primary one. This is so because patterns of remission and relapse differ in the presence of secondary disorders. Medication management of depressive symptoms was not necessary in primary alcoholics after a period of detoxification; however, depressive symptoms did require psychotropic medication in primary depressives even after a period of sustained abstinence. Approximately 80% of patients whose alcoholism remitted also experienced a remission of their depressive symptoms, whereas only 40% of patients without a remission in their alcohol dependence experienced a remission of depression. Similarly, only those subjects who maintained their remission from alcohol dependence were able to avoid a relapse of depression. Depression did persist in a substantial number of patients regardless of their remission status from alcohol dependence. Acknowledgement of these comorbidities and their successful treatments are a must in the holistic management of alcohol dependence.

Volume : 4 | Issue : 4 | Apr 2014 | ISSN - 2249-555X

REFERENCE

1. Fergusson DM, Boden JM, Horwood LJ. Tests of causal links between alcohol abuse or dependence and major depression. Arch Gen Psychiatry 2009;66(3):260-6. | 2. Falk DE, Yi HY, Hilton ME. Age of onset and temporal sequencing of lifetime DSM-IV alcohol use disorders relative to comorbid mood and anxiety disorders. Drug Alcohol Depend 2008 Apr 1;94(1–3):234-45. | 3. Schuckit MA, Smith TL, Danko GP. A comparison of factors associated with substance-induced versus independent depressions. J Stud Alcohol Drugs 2007;68(6):805-12. | 4. Berber MJ. Pharmacological treatment of depression. Can Fam Physician 1999;45:2663-8. | 5. Helzer JE, Pryzbeck TR. The co-occurrence of alcoholism with other psychiatric disorders in the general population and its impact on treatment. J Stud Alcohol 1988;49:219-24. | 6. Regier DA, Farmer ME, Rae DS, et al. Comorbidity of mental disorders with alcohol and other drug abuse. JAMA 1990;264:2511-18. | 7. Hesselbrock MN, Meyer R, Keener JJ. Psychopathology in hospitalized alcoholics. Arch Gen Psychiatry 1985;42:1050–55. | 8. Schuckit MA. Genetic and clinical implications of alcoholism and affective disorder. Am J Psychiatry 1986;143:140-47. | 9. Kushner MG, Sher KJ, Beitman BD. The relation between alcohol problems and the anxiety disorders. Am J Psychiatry 1990;147:685-95. | 10. Brown SA, Schuckit MA. Changes in depression among abstinent alcoholics. J Stud Alcohol 1988; 49:412-17. | 11. Woodruf Ra, Guze SB, Clayton PJ, Carr D. Alcoholism and depression. Arch Gen Psychiatry 1973;28:97-100. | 12. K M Davidson. Diagnosis of depression in alcohol dependence: changes in prevalence with drinking status. Br J Psychiatry 1995,166(2):199-204. | 13. Keeler MH, Taylor CI, Miller WC. Are all recently detoxified alcoholics depressed? Am J Psychiatry 1979;136:586-88. | 14. Powell BJ, Penick EC, Othmer E, et al. Prevalence of additional psychiatric syndromes among male alcoholics. J Clin Psychiatry 1982;43:404–7. | 15. Olgiati P, Liappas I, Malitas P, et al. Depression and Social Phobia Secondary to Alcohol Dependence. Neuropsychobiology 2007;56:111–18. | 16. Ross HE, Glaser FB, Germanson T. The prevalence of psychiatric disorders in patients with alcohol and other drug problems. Arch Gen Psychiatry 1988 Nov;45(11):1023-31. | 17. Mirin SM, Weiss RD, Griffin ML, Michael JL. Psychopathology in drug abusers and their families. Compr Psychiatry 1991;32:36-51. | 18. Meyer RE. How to understand the relationship between psychopathology and addictive disorders: Another example of chicken and the egg. In: R.E. Meyer, ed. Psychopathology and addictive disorders. New York: Guilford Press, 1986:3-16. | 19. Schuckit M, Pitts FN Jr, Reich T, King LJ, Winokur G. Alcoholism. I. Two types of alcoholism in women. Arch Gen Psychiatry 1969 Mar;20(3):301-6. | 20. Winokur G, Rimmer J, Reich T. Alcoholism IV. Is there more than one type of alcoholism? Br J Psychiatry 1971;118:525-31. | 21. Weissman MM, Myers JK, Harding PS. Prevalence and psychiatric heterogeneity of alcoholism in a United States urban community. J Stud Alcohol 1980;41:672-81. | 22. Mayfield DG, Coleman L. Alcohol use and affective disorder. Dis Nerv Syst 1968 Jul;29(7):467-74. | 23. Gibson S, Becker J. Alcoholism and depression. The factor structure of alcoholics responses to depression inventories. Q J Stud Alcohol 1973;34:400-08. | 24. Schuckit MA. Alcoholism and affective disorder: diagnostic confusion. In: Goodwin DW, Erikson CK, eds. Alcoholism and Affective Disorders. New York: SP Medical and Scientific Books, 1979:9-19. | 25. O'Sullivan K, Rynne C, Miller J,et al. A follow-up study on alcoholics with and without co-existing affective disorder. Br J Psychiatry 1988;152:813-9. | 26. Pond SM, Becker CE, Vandervoort R, Phillips M, Bowler RM, Peck CC. An evaluation of the effects of lithium in the treatment of chronic alcoholism. I. Clinical results. Alcohol Clin Exp Res 1981;5(2):247-51. | 27. O'Sullivan K, Whillans P, Daly M, Clare A, Cooney J. A comparison of alcoholics with and without coexisting affective disorder. Br J Psychiatry 1983;143:133-38. | 28. Schuckit MA. Treatment of anxiety in patients who abuse alcohol and Drugs. In: Noyes R, Roth M, Burros GD, eds. Handbook of Anxiety, vol 4: The Treatment of Anxiety. Amsterdam: Elsevier Science, 1990:461-80. | 29. Schuckit MA, Irwin M, Brown SA. The history of anxiety symptoms among 171 primary alcoholics. J Stud Alcohol 1990 Jan;51(1):34-41. | 30. Clark DB, Sayette MA. Anxiety and the development of alcoholism. Am J Addict 1993;2:59-76. | 31. Brown SA, Irwin M, Schuckit MA. Changes in anxiety among abstinent male alcoholics. J Stud Alcohol 1991;52:55-61. | 32. Stockwell T, Bolderston H. Alcohol and phobias. Br J Addict 1987;82:971-79. | 33. Aneshensel CS, Huba GJ. Depression, alcohol use, and smoking over one year: a four-wave longitudinal causal model. J Abnorm Psychol 1983;92:134-50. | 34. Tamerin JS, Weiner S, Mendelson JH. Alcoholics' expectancies and recall of experiences during intoxication. Am J Psychiatry 1970;126:1697-04. | 35. Mossberg D, Liljeberg P, Borg S: Clinical conditions in alcoholics during long-term abstinence: a descriptive, longitudinal treatment study. Alcohol 1985;2:551-53. | 36. Angst J, Vollrath M. The natural history of anxiety disorders. Acta Psychiatr Scand 1991 Nov;84(5):446-52. | 37. Norton CR, Malan J, Cairns SL, Wozney KA. Factors influencing drinking behavior in alcohol panickers and non-panickers. Behav Res Ther 1989;27:167-71. | 38. Weiss KJ, Rosenberg DJ. Prevalence of anxiety disorder among alcoholics. J Clin Psychiatry 1985 Jan;46(1):3-5. | 39. Stravynski A, Lamontagne Y, Lavallee YJ. Clinical phobias and avoidant personality disorder among alcoholics admitted to an alcoholism rehabilitation setting. Can J Psychiatry 1986;31:714-19. | 40. Sellers EM, Kalant H. Alcohol intoxication and withdrawal. N Engl J Med 1976; 294(14):757-62. | 41. Satel SL, Kosten TR, Schuckit MA, Fischman MW. Should protracted withdrawal from drugs be included in DSM-IV? Am J Psychiatry 1993;150:695-04. | 42. Schneider U, Altmann A, Baumann M, et al: Comorbid anxiety and affective disorder in alcohol dependent patients seeking treatment: the first multicentre study in Germany. Alcohol Alcohol 2001;36:219–23. | 43. Terra MB, Barros HM, Stein AT, et al. Social anxiety disorder in 300 patients hospitalized for alcoholism in Brazil: high prevalence and undertreatment. Compr Psychiatry 2006;47:463-67. | 44. Cornelius JR, Bukstein O, Salloum I,Clark D. Alcohol and psychiatric comorbidity. Recent Dev Alcohol 2003;16:361-74. | 45. Bijl RV, Ravelli A, van Zessen G: Prevalence of psychiatric disorder in the general population: results of The Netherlands Mental Health Survey and Incidence Study (NEMESIS). Soc Psychiatry Psychiatr Epidemiol 1998 Dec;33(12):587-95. | 46. Kessler RC, Crum RM, Warner LA, Nelson CB, Schulenberg J, Anthony JC: Lifetime co-occurrence of DSM-III-R alcohol abuse and dependence with other psychiatric disorders in the National Comorbidity Survey. Arch Gen Psychiatry 1997 Apr;54(4):313-21. | 47. Schuckit MA, Hesselbrock V. Alcohol Dependence and Anxiety Disorders:What Is the Relationship? Am J Psychiatry 1994 Dec;151(12):1723-34. | 48. Liskow B, Mayfield D, Thiele J. Alcohol and affective disorder: assessment and treatment. J Clin Psychiatry 1982;43:144-47. | 49. Hatsukami D, Pickens RW. Posttreatment depression in an alcohol and drug abuse population. Am J Psychiatry 1982;139:1563-66. | 50. Mossberg D, Liljeberg P, Borg S. Clinical conditions in alcoholics during long-term abstinence: a descriptive, longitudinal treatment study. Alcohol 1985;2:55-53. | 51. Bowen RC, Cipywnyk D, D'Arcy C, Keegan D. Alcoholism, anxiety disorders, and agoraphobia. Alcohol Clin Exp Res 1984;8:48-50. | 52. Noyes R, Crowe RR, Harris EL, Hamra BJ, McChesney CM, Chaudhry DR: Relationship between panic disorder and agoraphobia: a family study. Arch Gen Psychiatry 1986;43:227-32. | 53. Bibb JL, Chambless DL. Alcohol use and abuse among diagnosed agoraphobics. Behav Res Ther 1986;24:49-8. | 54. Merikangas KR, Mehta RL, Molnar BE, et al. Co-morbidity of substance use disorders with mood and anxiety disorders: results of the International Consortium in Psychiatric Epidemiology. Addict Behav 1998;23:893-07. | 55. Swendsen JD, Merikangas KR, Canino GJ, Kessler RC, Rubio-Stipec M, Angst J. The comorbidity of alcoholism with anxiety and depressive disorders in four geographic communities. Compr Psychiatry 1998;39:176-84. | 56. Kessler RC, McGonagle KA, Zhao S, et al. Lifetime and 12-month prevalence of DSM-III-R psychiatric disorders in the United States. Results from the National Comorbidity Survey. Arch Gen Psychiatry 1994; 51:8-19. | 57. Crum RM, Helzer JE, Anthony JC. Level of education and alcohol abuse and dependence in adulthood: a further inquiry. Am J Publ Health 1993;83:830-37. |

| Acknowledgements – Nil. | Conflict of Interest – Nil. | Financial Support – Nil. |