

Research Article

Chronic Hepatitis B & C – Blessing in Disguise for Alcoholics and Smokers.

Harman Singh, Parveen Malhotra, Avani Sharma, Rahul Siwach, Bibin CF, Pranav Malhotra, Anuj Sharma.

Department of Medical Gastroenterology, PGIMS, Rohtak and VMMC & Safdarjung Medical College, New Delhi, India.

Abstract

Introduction: Alcohol and tobacco intake are closely linked habits, often increasing risks for cancers and other diseases, and many studies have shown high co-occurrence, especially in India, influenced by age, gender, education, and peer/family habits, with physician advice showing promise for cessation. The factors like peer pressure, stress, profession like drivers and army, affect imbibing of habit of drinking alcohol and smoking. Many patients of hepatitis B and C are chronic smokers and alcoholics and are terrified when they come to know about their disease for the first time. Majority of them know that chronic hepatitis B & C can lead to liver damage and alcohol & smoking also effect liver. Thus, they are very receptive when they are newly diagnosed. This is the best time to get them abstained from it and same practice was followed with successful results.

Aim of study: To determine the abstinence from alcohol intake and smoking in patients of chronic hepatitis B and C who reported in Department of Medical Gastroenterology, PGIMS, Rohtak.

Materials & Methods: It was prospective study conducted at Department of Medical Gastroenterology, Post Graduate Institute of Medical Sciences (PGIMS), Rohtak, over a period of ten years from 1st December, 2015 to 30th November, 2025 during which 24000 patients of chronic hepatitis B and C who reported in Medical Gastroenterology OPD were interviewed for alcohol intake and smoking, at the time of enrolment. The patients who were in habit of taking alcohol or smoke were motivated to completely abstain from it. On every follow-up, they were re-confirmed for abstinence, both from patient themselves and accompanying family members. The findings were regularly recorded in their records. The details regarding at which age they started, under what circumstances this habit occurred, meaning by under pressure from friend circle or from family members, was also noted.

Results: We enrolled total 24000 patients who reported to Department of Medical Gastroenterology for treatment of chronic hepatitis B and C. Out of these 24000 patients, 16000 (66.66%) were having chronic hepatitis C and 8000 (33.33%) were having chronic hepatitis B. In total pool of 16000 HCV patients, 10,400 (65%) were male and 5600 (35%) were female whereas among total 8000 HBV patients, 5040 (63%) were male and 2960 (37%) were female. The predominance was of rural background was seen in both HCV and HBV groups i.e. 10720 patients (67%) and 5120 patients (64%) respectively. Out of total 24000 patients, total 7680 (32%) were consuming alcohol. Out of these 7680 alcoholics, 2227 (28.99%) were only alcoholics and 5453 (71.01%) were in habit of smoking along with alcohol. On regular counselling, 6144 (80%) left alcohol but 1536 (20%) continued to drink alcohol. Out of total 24000 patients, total 11520 (48%) were smoker. Out of these 11520 smokers, 5760 (50%) were selectively smokers and 5760 (50%) were in habit of smoking along with alcohol. On regular counselling, 8064 (70%) left smoking but 3456 (30%) continued to smoke. The major chunk of patients who continued to smoke were hukkah smokers and belonged to rural background where hukkah smoking is issue of prestige and social bonding.

Conclusion: Alcohol and smoking are risk factors for various diseases including malignancy. Smoking leads to increased viral replication in HCV and HBV and alcohol leads to detrimental effect on liver, reserve of which is compromised by various factors like chronic viral infections. In majority, the habit of drinking alcohol and smoking starts in young age due to pressure from friend circle. The proper counselling by treating physician, especially at time of diagnosis of hepatitis B and C is effective in developing abstinence in the smokers and drinkers.

Keywords: Hepatitis B, Hepatitis C, Alcohol, Smoking, Rural, Urban, Male.

***Corresponding Author:** Parveen Malhotra, Department of Medical Gastroenterology, PGIMS, Rohtak & 128/19, Civil Hospital Road, Rohtak, Haryana, India.

Mobile: 91-8182000051, **Email:** drparveenmalhotra@yahoo.com.

Received: 28-Dec-2025, Manuscript No. JJOGASTRO - 5353 ; **Editor Assigned:** 30-Dec-2025 ; **Reviewed:** 08-Jan-2026, QC No. JJOGASTRO - 5353 ;

Published: 13-Jan-2026.

Citation: Parveen Malhotra. Chronic Hepatitis B & C-Blessing in Disguise for Alcoholics and Smokers. Japanese Journal of Gastroenterology. 2026 January; 15 (1).

Copyright © 2026 Parveen Malhotra. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

INTRODUCTION

The close association between tobacco and alcohol use is very well proven and established, about 80% of alcoholics smoke, and 30% of smokers are alcoholics. {1} The association between alcohol and tobacco use has been studied in adults, {2-5} adolescents {6-8} and specific groups.{9} Prospective analyses reveal that tobacco use is associated with heavy drinking in later life. {10,11} Heavier alcohol use has been reported among those with nicotine dependence, and is more among those with severe forms of nicotine dependence. {12-14} The opposite is also true. {15,16} The prevalence of alcohol and tobacco use in the northeastern states of India was high, {8,17} with a strong association between alcohol and tobacco use. {18} Lower education levels and specific occupations (like tea industry workers in India) correlate with higher use. The patterns vary; somewhere rural women might drink more than urban and, in some areas, it can be reverse situation but less tobacco intake is there in comparison to males. Peer pressure, family history, stress, loneliness, and financial issues drive initiation, often in young people between 21-30 years of age. Concurrent use significantly increases risks for oropharyngeal cancers; alcohol also harms cardiovascular health (stroke, heart disease). Physician guidance is effective for cessation; focused campaigns targeting youth in high-risk areas are recommended. In India, it is also known that such practice usually starts during the period of training in institutions, with equally contributing factor being easy availability of such substances (personal experiences and observations). Owing to various external and internal factors during professional training, students are under a lot of stress which makes them vulnerable for these substances. The increasing abuse and its impact on physical and psychosocial including cardiovascular health is a rising public health concern which calls for early preventive action. Many patients of hepatitis B and C are chronic smokers and alcoholics and are terrified when they come to know about their disease for the first time. Majority of them know that chronic hepatitis B & C can lead to liver damage and alcohol & smoking also effect liver. Thus, they are very receptive when they are newly diagnosed. This is the best time to get them abstained from it and same practice was followed with successful results.

AIM OF STUDY

To determine the abstinence from alcohol intake and smoking in patients of chronic hepatitis B and C who reported in Department of Medical Gastroenterology, PGIMS, Rohtak.

MATERIAL AND METHODS

It was prospective study conducted at Department of Medical Gastroenterology, Post Graduate Institute of Medical Sciences (PGIMS), Rohtak, over a period of ten years from 1st December, 2015 to 30th November, 2025 during which 24000 patients of chronic hepatitis B and C who reported in Medical Gastroenterology OPD were interviewed for alcohol intake and smoking, at the time of enrolment. The patients who were in habit of taking alcohol or smoke were motivated to completely abstain from it. On every follow-up, they were re-confirmed for abstinence, both from patient themselves and accompanying family members. The findings were regularly recorded in their records. The details regarding at which age they started, under what circumstances this habit occurred, meaning by under pressure from friend circle or from family members, was also noted.

Statistical Analysis

All the data was entered in Microsoft Excel and was analysed using SPSS 15.0 version.

OBSERVATIONS & RESULTS

We enrolled total 24000 patients who reported to Department of Medical Gastroenterology for treatment of chronic hepatitis B and C. Out of these 24000 patients, 16000 (66.66%) were having chronic hepatitis C and 8000 (33.33%) were having chronic hepatitis B. In total pool of 16000 HCV patients, 10,400 (65%) were male and 5600 (35%) were female whereas among total 8000 HBV patients, 5040 (63%) were male and 2960 (37%) were female. The predominance was of rural background was seen in both HCV and HBV groups i.e. 10720 patients (67%) and 5120 patients (64%) respectively. Out of total 24000 patients, total 7680 (32%) were consuming alcohol. Out of these total 7680, 4608 (60%) were of HCV and rest 3072 (40%) were having HBV. Out of these 7680 alcoholics, 2227 (28.99%) were only alcoholics and 5453 (71.01%) were in habit of smoking along with alcohol. On regular counselling, 6144 (80%) left alcohol but 1536 (20%) continued to drink alcohol. Out of total 24000 patients, total 11520 (48%) were smoker. Out of these total 11520 smokers, 6630 (57.55%) were having HCV and rest 4890 (42.45%) were of HBV. Out of these 11520 smokers, 5760 (50%) were selectively smokers and 5760 (50%) were in habit of smoking along with alcohol. On regular counselling, 8064 (70%) left smoking but 3456 (30%) continued to smoke. The major chunk of patients who continued to smoke were hukkah smokers and belonged to rural background where hukkah smoking is issue of prestige and social bonding.

Table 1. Showing Distribution of Patients on Basis of Gender and Aetiology

Total Patients (24000)	Male	Female	Rural	Urban	Alcohol	Smoker
HCV (16000)	10,400 (65%)	5600 (35%)	10720 (67%)	5280 (33%)	4608 (28.8%)	6630 (41.43%)
HBV (8000)	5040 (63%)	2960 (37%)	5120 (64%)	2880 (36%)	3072 (38.4%)	4890 (61.12%)

Table 2. Showing Spectrum in Alcoholic Patients

Total Patients Drinking Alcohol	Only Taking Alcohol	Smoking Along with Alcohol	Patients who left Alcohol	Patients who Continued Drinking Alcohol
7680 (32%)	2227 (28.99%)	5453 (71.01%)	6144 (80%)	1536 (20%)

Table 3. Showing Spectrum in Patients Who Smoked

Total Patients Who Smoked	Only Smokers	Smoking Along with Alcohol	Patients who left Smoking	Patients who Continued Smoking
11520 (48%)	5760 (50%)	5760 (50%)	8064 (70%)	3456 (35%)

DISCUSSION

Substance abuse refers to the hazardous or harmful use of psychoactive substances, including alcohol, illicit drugs, and tobacco.^{19} The WHO estimates a burden of worldwide psychoactive substance use of around 2 billion alcohol users, 1.3 billion smokers, and 185 million drug users.^{20} For youth, the prevalence of alcohol and smoking is 19.0% and 8.3%, respectively. ^{21} In India, the prevalence of current tobacco smoking among youth has been estimated to be 14.6% (19% in males and 8.3% in females). However, a national survey (2015–2016) in India revealed that 44.5% of adult men and 6.8% of women consume tobacco in some form and 29.2% and 1.2% consume alcohol, respectively. ^{22} It has been reported that smoking cessation guidance and intervention by physicians have a significant effect on patients' smoking behaviour, and medical professionals can reduce smoking prevalence in society by offering smoking cessation advice to patients. ^{23,24,25} More importantly, physicians are expected to play an important role in the campaign against smoking, which means not only giving advice to their patients but also setting an example for them. Globally, it is observed that consumption of alcohol, tobacco, or drug is common among medical and paramedical personnel in spite of their professional knowledge. ^{26} Our study pool was also of good number of 24000 patients of HBV and HCV and for reducing bias, intentionally consecutive patients were interviewed. Secondly, as females, especially in our area are in less habit of taking alcohol or smoking, had significantly lesser representation, in comparison to males. Overall, one third patients were found to be alcoholics and nearly half were smokers. One characteristic thing noted was that majority patients who drink were smokers also but reverse was not true. In smoking analysis, hukkah smoking was predominantly seen in rural areas. Females had minimal representation and

majority of them sniffed tobacco and belonged to rural area. The prevalence of smoking and alcoholism was more in HBV group, in comparison to HCV group. Regular counselling by our team for abstinence from alcohol and smoking had positive impact and majority left. Many patients of hepatitis B and C are chronic smokers and alcoholics and are terrified when they come to know about their disease for the first time. Majority of them know that chronic hepatitis B & C can lead to liver damage and alcohol & smoking also effect liver. Thus, they are very receptive when they are newly diagnosed. This is the best time to get them abstained from it and same practice was followed with successful results. Several studies have investigated the association between alcohol consumption and smoking. Prior research has shown that alcohol increases cravings for tobacco smoking in both men and women ^{27}. It has also been reported that alcoholic beverages enhance the taste of cigarette smoke ^{28}. Additionally, alcoholic beverages are associated with a higher likelihood of smoking cravings ^{29}. One study that analysed the interaction between nicotine and alcohol claimed that pre-exposure to nicotine increased self- administration of alcohol and decreased alcohol-induced dopamine responses. The authors reported that this blunted dopamine response was caused by increased inhibitory synaptic transmission onto dopamine neurons ^{30}. Therefore, nicotine exposure may increase alcohol consumption.

CONCLUSION

Alcohol and smoking are risk factors for various diseases including malignancy. Smoking leads to increased viral replication in HCV and HBV and alcohol leads to detrimental effect on liver, reserve of which is compromised by various factors like chronic viral infections. In majority, the habit of drinking alcohol and smoking starts in young age due

to pressure from friend circle. The proper counselling by treating physician, especially at time of diagnosis of hepatitis B and C is effective in developing abstinence in the smokers and drinkers.

Limitation of Study

In our study group, the major share was of HCV patients in whom maximum achieve sustained virological response and are non-cirrhotic. Hence, they were followed for 24 -36 weeks. Thus, whether, they remained abstinent after that period, is unknown. In comparison to HCV, majority of HBV patients remained on follow up, hence interpretation in them was more accurate.

Conflict of Interest

The authors declare that there was no conflict of interest and no funding was taken from any source to conduct this research.

REFERENCES

1. Miller NS, Gold MS. Comorbid cigarette and alcohol addiction: Epidemiology and treatment. *J Addict Dis* 1998; 17:55-66.
2. DiFranza JR, Guerrera MP. Alcoholism and smoking. *J Stud Alcohol* 1990; 51:130-5.
3. Johnson KA, Jennison KM. The drinking-smoking syndrome and social context. *Int J Addict* 1992; 27:749-92.
4. Nuttens MC, Romon M, Ruidavets JB, Arveiler D, Ducimetiere P, Lecerf JM, et al. Relationship between smoking and diet: The MONICA-France project. *J Intern Med* 1992; 231:349-56.
5. York JL, Hirsch JA. Drinking patterns and health status in smoking and non-smoking alcoholics. *Alcohol Clin Exp Res* 1995; 19:666-73.
6. Simon TR, Sussman S, Dent CW, Burton D, Flay BR. Prospective correlates of exclusive or combined adolescent use of cigarettes and smokeless tobacco: A replication- extension. *Addict Behav* 1995; 20:517-24.
7. Ritchey PN, Reid GS, Hasse LA. The relative influence of smoking on drinking and drinking on smoking among high school students in a rural tobacco-growing county. *J Adolesc Health* 2001; 29:386-94.
8. Sinha DN, Gupta PC, Pednekar MS. Prevalence of smoking and drinking among students in north-eastern India. *Natl Med J India* 2003; 16:49-50.
9. Spangler JG, Dignan MB, Michielutte R. Correlates of tobacco use among native American women in western North Carolina. *Am J Public Health* 1997; 87:108-11.
10. Jackson KM, Sher KJ, Wood PK, Bucholz KK. Alcohol and tobacco use disorders in a general population: Short-term and long-term associations from the St Louis epidemiological catchment area study. *Drug Alcohol Depend* 2003; 71:239-53.
11. Jensen MK, Sorensen TI, Andersen AT, Thorsen T, Tolstrup JS, Godtfredsen NS, et al. A prospective study of the association between smoking and later alcohol drinking in the general population. *Addiction* 2003; 98:355-63.
12. Hanningfield JE, Clayton R, Pollin W. Involvement of tobacco in alcoholism and illicit drug use. *Br J Addict* 1990; 85:279-91.
13. Daeppen JB, Smith TL, Danko GP, Gordon L, Landi NA, Nurnberger JI Jr, et al. Clinical correlates of cigarette smoking and nicotine dependence in alcohol-dependent men and women. The Collaborative Study Group on the Genetics of Alcoholism. *Alcohol* 2000; 35:171-5.
14. Schumann A, Hapke U, Rumpf HJ, Meyer C, John U. The association between degree of nicotine dependence and other health behaviours: Findings from a German general population study. *Eur J Public Health* 2001; 11:450-2.
15. Tuomi Lehto J, Zimmet P, Taylor R, Bennet P, Wolf E, Kankaanpää J. Smoking rates in Pacific islands. *Bull World Health Organ* 1986; 64:447-56.
16. Batel P, Pessione F, Maitre C, Rueff B. Relationship between alcohol and tobacco dependencies among alcoholics who smoke. *Addiction* 1995; 90:977-80.
17. Chaturvedi HK, Phukan RK, Mahanta J. The association of selected sociodemographic actors and differences in patterns of substance use: A pilot study in selected areas of Northeast India. *Subst Use Misuse* 2003; 38:1305-22.
18. Mohan D, Chopra A, Sethi H. The co-occurrence of tobacco and alcohol in general population of metropolis Delhi. *Indian J Med Res* 2002; 116:150-4.
19. Substance Abuse Available from: http://www.who.int/topics/substance_abuse/en. [Last accessed on 2017 Dec 16].

20. The Global Burden of Substance Abuse Available from: http://www.who.int/substance_abuse/facts/global_burden/en/. [Last accessed on 2017 Dec 16].
21. Global Health Observatory: Prevalence of Tobacco Use Available from: <http://www.who.int/gho/tobacco/use/en/>. [Last accessed on 2017 Dec 16].
22. National Family Health Survey-4: India New Delhi and Mumbai IIPS, MOHFW:2015-1.
23. Goldberg RJ, Ockene IS, Ockene JK, Merriam P, Kristeller J. Physicians' attitudes and reported practices toward smoking intervention J Cancer Educ. 1993;8:133-9.
24. Simpson D. Doctors and Tobacco: Medicine's Big Challenge 2000 London European Commission, Tobacco Control Resource Centre.
25. Leave the Pack Behind. . Geneva: WHO; 1999:33-9.
26. Health professionals' alcohol-related professional practices and the relationship between their personal alcohol attitudes and behaviour and professional practices: A systematic review Int J Environ Res Public Health. 2014; 11:218-48.
27. King A, McNamara P, Conrad M, Cao D. Alcohol-induced increases in smoking behavior for nicotine and denicotinized cigarettes in men and women. Psychopharmacology (Berl). 2009;207(1):107-117. doi:10.1007/s00213-009-1638-9.
28. McClernon FJ, Westman EC, Rose JE, Lutz AM. The effects of foods, beverages, and other factors on cigarette palatability. Nicotine Tob Res. 2007;9(4):505-510. doi:10.1080/14622200701243177.
29. Miyoshi K, Kimura Y, Nakahata M, Miyawaki T. Foods and beverages associated with smoking craving in heated tobacco product and cigarette smokers: a cross-sectional study. Tob Induc Dis. 2024;22(January):1-10. doi:10.18332/tid/175623.
30. Doyon WM, Dong Y, Ostroumov A, Thomas AM, Zhang TA, Dani JA. Nicotine decreases ethanol-induced dopamine signaling and increases self-administration via stress hormones. Neuron. 2013;79(3):530-540. doi: 10.1016/j.neuron.2013.06.006.