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CURRENT SITUATION AND SOME FACTORS RELATED TO INSOMNIA IN CIRRHOSIS PATIENTS AT THE GASTROENTEROLOGY DEPARTMENT-VIET TIEP FRIENDSHIP HOSPITAL IN 2025

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ABSTRACT

Objective: To describe and identify some factors related to insomnia in cirrhotic patients at the Gastroenterology Department - Viet Tiep Friendship Hospital in 2025.

Method: Cross-sectional descriptive study, convenient sampling on 116 cirrhotic patients.

Results: The proportion of respondents with insomnia was 66.38%; of which moderate insomnia accounted for the highest proportion at 44.1%; mild insomnia accounted for 31.2%; and severe insomnia accounted for 24.7%. Analysis of some related factors showed: There was a statistically significant correlation between the severity of insomnia and disease stage, pain level, and anxiety level ($p < 0.05$).

Conclusion: The majority of cirrhotic patients (66.38%) suffered from insomnia, with severe insomnia accounting for 24.7%. There was a correlation between insomnia and disease stage, pain level, and anxiety level. Therefore, to improve sleep for patients with cirrhosis, it is necessary to focus on reducing pain and anxiety, especially in patients with decompensated cirrhosis.

Keywords: Insomnia, cirrhosis, Viet Tiep Friendship Hospital.

1. INTRODUCTION

Cirrhosis is a chronic hepatic disease characterized by the replacement of functional liver tissue with fibrous tissue, scarring, and the formation of regenerative nodules, ultimately leading to the loss of liver function. According to a 2020 systematic review on the global burden of cirrhosis across 195 countries and territories from 1990 to 2017, there were 1.32 million deaths attributable to cirrhosis in 2017, representing 2.4% of total global mortality. Of these, 33% were female (440,000) and 66.7% were male (883,000) [1]. Patients with cirrhosis often present at late stages with acute symptoms such as ascites, edema, gastrointestinal bleeding, digestive disorders, and right upper quadrant pain. These symptoms significantly impair quality of life (QoL). Research by Nguyen Phuong Nhung and Nguyen Thi Tuyen at Bach Mai Hospital indicated that only 25.46% of cirrhotic inpatients reported a "good" QoL, while 74.07% reported "moderate" and 0.46% reported "low" levels [2]. Given the impact on both physical and mental health, this study aims to:

1. Describe the current status of insomnia among cirrhotic patients at the Gastroenterology Department of Viet Tiep Friendship Hospital in 2025.

2. Identify factors associated with insomnia within this study population.

2. SUBJECTS AND METHODS

2.1. Study Subjects

Patients diagnosed with cirrhosis receiving inpatient treatment at the Gastroenterology Department, Viet Tiep Friendship Hospital, from October 2025 to March 2026.

- ***Inclusion Criteria:*** Confirmed diagnosis of cirrhosis; voluntary participation.

- ***Exclusion Criteria:*** Concurrent hepatocellular carcinoma (liver cancer); refusal to participate.

2.2. Location of the study

Gastroenterology Department, Viet Tiep Friendship Hospital.

2.3. Time of the study

Study Period: October 2025 to March 2026.

Data Collection: November 2025 to January 2026.

2.4. Methodology

Design: Cross-sectional descriptive study.

2.5. Sample size and sample selection

- Sample size: The entire patient population met the selection criteria at Viet Tiep Friendship Hospital from the beginning of November 2025 to the end of January 2026. The total number of study subjects selected was 116 patients.

- Sampling method: Convenient, indeterminate sampling, selecting the entire population within the data collection period

2.6. Variables and Indicators

- Characteristics of the study subjects: age, gender, place of residence, occupation, income, educational level.

- Characteristics of cirrhosis: disease stage, number of days hospitalized, caregiver

- Insomnia status

- Anxiety status

- Pain status

2.7. Data Collection Methods

The research toolkit consists of 3 parts:

- Part 1: Questions about the general characteristics of the

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research subjects

- Part 2: Insomnia Severity Index (ISI) questionnaire [3] assess insomnia status, consisting of 7 questions, each question worth 0-4 points, total score 0-28 points. In which:

+ 0-7 points: No insomnia

+ 8-14 points: Mild insomnia

+ 15-21 points: Moderate insomnia

+ 22-28 points: Severe insomnia

- Part 3: Questionnaire to identify related factors: GAD-7 anxiety assessment questionnaire; VAS pain assessment questionnaire

+ GAD-7 anxiety assessment questionnaire [4] consists of 7 questions, each question worth 0-3 points. In which:

++ 0-4 points: Minimal anxiety (normal)

++ 5-9 points: Mild anxiety

++ 10-14 points: Moderate anxiety

++ ≥15 points: Severe anxiety

+ The VAS pain assessment questionnaire consists of 10 questions:

++ 0 points: No pain

++ 1-3 points: Mild pain

++ 4-6 points: Moderate pain

++ 7-9 points: Severe pain

++ 10 points: Unbearable pain

Data collection: After developing and testing the tool, researchers collected data following these steps: Training of Researchers who are lecturers participating in the research group. Selection of research subjects according to sampling criteria. Investigators conducted direct interviews with research subjects using the designed questionnaire at the Department of Gastroenterology, Viet Tiep Friendship Hospital.

2.8. Data Analysis

Data were cleaned, processed, and stored by the researchers collected and analyzed using SPSS 18.0. Use chi-square test analysis algorithms, the comparison is statistically significant with $p \leq 0.05$.

2.7. Ethical Considerations

This is a clinical descriptive study with no therapeutic intervention. Personal information was kept confidential. The study was approved by the Institutional Review Board of Hai Phong University of Medicine and Pharmacy (Decision 2829/QD-YDHP).

3. RESULTS

Table 1. General Characteristics of Study Subjects (n=116)

Variable		n	%
Age	< 60	56	48,3
	≥ 60	60	51,7
	Mean: 60,6 ± 10,9		
Gender	Male	111	95,7
	Female	5	4,3
Area	City	66	56,9
	Countryside	50	43,1
Education level	Elementary	28	24,1
	Middle school	34	29,3
	High school	37	31,9
	Collegue/ University/ Post graduate	17	14,7
Job	Officials and employees	8	6,9
	workers/farmers	56	48,3
	Unemployed/ Others	29	25,0
	Retirement	23	19,8
Stage of the disease	Compensated cirrhosis	37	31,9
	Decompensated cirrhosis	79	68,1
Reason	Alcohol	107	92,2
	Virus	9	7,8
Number of days hospitalized	<1 week	69	59,5
	1-2 weeks	47	40,5
Caregiver	Yes	104	89,7
	No	12	10,3

Of the 116 study subjects, the majority were male, accounting for 95.7%. The youngest subject was 43 years old, the oldest 82 years old, with an average age of 60.6 ± 10.9 years. The highest percentage of subjects had a high school education (31.9%), and the percentage of dependent patients was 31%. Most patients had a caregiver (89.7%); and the length of hospital stay for this period was less than one week (59.5%).

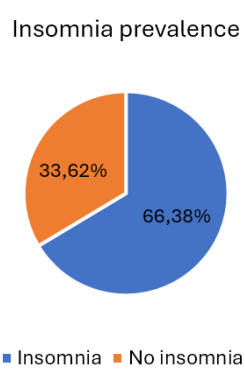


Figure 1. Insomnia prevalence in cirrhosis patients according to the ISI (n=116)

77 participants (66.38%) suffered from insomnia, while 39 participants (33.6%) did not.

Table 2. Characteristics of insomnia in patients with cirrhosis (n=116)

Characteristics	Mean	SD	Min- Max
Insomnia	13,11	8,64	0-28

The study participants had an average score of 13.11 ± 8.84, with a lowest score of 0 and a highest score of 28. The average score indicates that the participants experienced mild insomnia.

Table 3: 33.6% of participants did not experience insomnia; Among those who did experience insomnia, the group with moderate insomnia accounted for a higher proportion, at 29.3%.

Table 3. Classification of insomnia severity in patients with cirrhosis (n=116)

Classification of insomnia	n	%
No insomnia	39	33,6
Mild insomnia	24	20,7
Moderate insomnia	34	29,3
Severe insomnia	19	16,4
Total	116	100

Table 4. Some factors associated with insomnia (n=116)

Variable		No insomnia	Insomnia	OR 95%- CI	P
		n (%)	n (%)		
Stage of the disease	Compensated cirrhosis	20 (54,1)	17 (45,9)	3,715 (1,62 - 8,49)	0,001
	Decompensated cirrhosis	19 (24,1)	60 (75,9)		
Reason	Alcohol	34 (31,8)	73 (68,2)	0,373 (0,09 -1,47)	0,147
	Virus	5 (55,5)	4 (44,5)		
Number of days hospitalized	<1 week	26 (37,7)	43 (62,3)	1,581 (0,70 - 3,53)	0,262
	1-<2 weeks	13(27,7)	34 (72,3)		
Caregiver	No	5 (41,7)	7 (58,3)	0,680 (0,20 - 2,30)	0,533
	Yes	34 (32,7)	70 (67,3)		
Classification of pain	No	30 (49,2)	31 (50,8)	4,946 (2,06 - 11,84)	0,000
	Yes	9 (16,4)	46 (83,6)		
Classification of anxiety	No	35 (54,6)	29 (45,4)	14,483 (4,66 - 44,94)	0,000
	Yes	4 (7,7)	48 (92,3)		

Patients with decompensated cirrhosis have a 3.715 times higher risk of insomnia compared to patients with compensated cirrhosis (p=0.001). Patients experiencing pain have a 4.496 times higher risk of insomnia compared to patients without pain (p=0.000). Patients with anxiety have a 14.843 times higher risk of insomnia compared to patients without anxiety (p=0.000).

4. DISCUSSION

Table 1 shows that the youngest study subjects were 43 years old, the oldest were 82 years old, and the average age was 60.6 ± 10.9 years old; this result is consistent with the progression of cirrhosis as a chronic disease, progressing over a long period of time, and patients only go to the hospital when symptoms become severe. Therefore, in our study, there were no patients under 43 years old, and the proportion of patients in the decompensated cirrhosis stage was higher than in the compensated stage, accounting for 68.1%. When analyzing the study subjects by gender, males accounted for the majority at 95.7%. This study result is similar to the study by authors Vo Duy Thong and Ho Thi Van Anh in 2021 in the study of clinical and paraclinical characteristics in cirrhosis patients with hepatic encephalopathy complications, which was the male/female ratio = 2.7/1 [5]. In Vietnam, the main causes of cirrhosis are alcohol and viral hepatitis B and C. The rate of alcohol use is higher in men than in women, therefore the rate of male patients is higher than that of female patients.

The results in Figure 3.1 show that insomnia is a high percentage of cirrhosis patients (66.38%). The rate of mild insomnia is 21.7%; moderate insomnia is 29.3%; and severe insomnia is 16.4%. In 2010, Montagnese S et al. studied the impact of poor sleep quality on the cognitive function of cirrhosis patients and found that 70% of cirrhosis patients, regardless of the cause, experienced sleep disorders [6]. In Vietnam, no author has evaluated the rate of insomnia in patients with cirrhosis. However, according to the study by Dao Thi Hong Mai and colleagues on the results of caring for decompensated cirrhosis patients using a team model at Military Central Hospital 108, the results of care showed that 85.3% of patients had improved symptoms upon discharge, including insomnia [7]. Our study has shown that some factors are statistically significant in relation to insomnia in patients with cirrhosis in Table 3.4. Patients with decompensated cirrhosis have a 3.715 times higher risk of insomnia compared to patients with compensated cirrhosis with p=0.001. Patients with pain have a 4.496 times higher risk of insomnia compared to patients without pain; p=0.000. Patients with anxiety have a 14.843 times higher risk of insomnia compared to patients without anxiety, p=0.000. This result shows that the later the stage of the disease, with severe symptoms such as ascites, edema, abdominal pain, digestive disorders, anxiety about the illness, etc., the greater the risk of insomnia for patients.

5. CONCLUSIONS

The majority of cirrhosis patients (66.38%) experienced

insomnia. The prevalence of mild insomnia was 21.7%; moderate insomnia 29.3%; and severe insomnia 16.4%.

There was a correlation between insomnia and disease stage (OR=3.715; CI: 1.62 - 8.49; p<0.05); insomnia and pain level (OR=4.946; CI: 2.06 - 11.84; p<0.05); and insomnia and anxiety level (OR=14.483; CI: 4.66 - 44.94; p<0.05). There was no correlation between age, gender, cause, caregiver, or number of days hospitalized with insomnia in cirrhosis patients.

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