SUICIDAL BEHAVIOR IN LIVER CIRRHOSIS PATIENTS

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Relevance

The study was conducted in 42 patients with cirrhosis of the liver with established disability, the features of suicidal thoughts and attempts in this category of patients were studied. Chronic liver disease is a long-term and debilitating condition in which comorbid mental illnesses are added to the incidence. The present study is aimed at studying how cirrhosis of the liver affects the overall picture of suicide. It remains unclear how physical disability can lead to an increased risk of suicidal acts.

Key words: chronic liver disease, cirrhosis of the liver, suicidal behavior.

Introduction. It has been established that the final stage of almost all chronic liver diseases is cirrhosis, which causes a number of life-threatening complications. The most common cause of liver cirrhosis is considered to be chronic viral hepatitis B, followed by alcoholic hepatitis and chronic viral hepatitis C [4-6]. The most common complication in these patients is ascites, and the most lethal complication is bleeding from varicose veins. Other intermediate and late complications include spontaneous bacterial peritonitis, hepatic encephalopathy, and hepatorenal syndrome.

The progressive nature of liver cirrhosis results in a high rate of hospitalizations, intensive medication, increased financial burden, frequent need for invasive procedures, changes in body image, and increased morbidity and mortality [1,2]. All these factors contribute to physical and psychological stress, which mediates the development of depression and the formation of suicidal behavior. Several studies have shown that psychological stress in patients with liver cirrhosis is of clinical importance. Nearly one in six patients with cirrhosis of the liver has moderate or more severe depression than controls, and nearly 62% of these patients have moderate or higher anxiety symptoms, according to the researchers. The severity of distress and depression correlates with the severity of liver disease [3]. Moreover, mental disorders have been found to worsen the clinical prognosis in patients with chronic liver diseases, liver cirrhosis, and after liver transplantation [7–8]. Current evidence suggests that the risk of suicide in individuals suffering from chronic diseases such as cancer, kidney or heart failure is significantly higher than in the general population [1, 2, 4]. Patients with chronic liver disease also have more frequent suicide attempts as a result of psychological stress and depression [5]. It is becoming clear that psychological intervention is needed to prevent suicide in cirrhosis of the liver. Using the integrated

care model, specific risk factors were identified during screening, treatments were suggested, and clinical and mental health improvements were made through regular follow-up. However, there are relatively few studies on the assessment of suicidal risk in patients with liver cirrhosis, and the relationship between liver cirrhosis and suicidal behavior remains poorly understood.

Objective: The aim of this study was to study the characteristics of suicidal behavior in patients with liver cirrhosis.

Research methods

The study was conducted on the basis of the Bukhara Regional Infectious Diseases Hospital, as well as regional and district multidisciplinary hospitals. 42 patients (35 men and 7 women) suffering from liver cirrhosis were examined. The median age at baseline was 66 years (interquartile range [IQR] 45–71 years) and the median follow-up period was 4.75 years (IQR 2.29–6.28 years). Of the examined patients, 27 (64.3%) had a disability due to liver disease, in 15 (35.7%) patients, disability was not established. In 14 patients, disability was first established during the study period, the remaining patients were hospitalized at least twice, and were also treated on an outpatient basis. To assess emotional disorders, the Hospital Anxiety and Depression Scale (HADS) was used to determine the severity of anxiety or depression.

The scale is a series of statements, each of which corresponds to 4 answer options, evaluated in points. Indicators of 0-7 points indicate the absence of anxiety / depression, 8-10 points – about subclinical anxiety / depression, 11 points and above – about clinically expressed anxiety or depression.

The risk of suicidal behavior was assessed using the Beck Suicidal Thoughts Scale and the B. Luban-Plozz Suicide Risk Questionnaire. The Beck scale makes it possible to state both the presence, frequency and duration of suicidal thoughts, as well as the activity of suicidal intentions, as well as the presence of factors hindering their implementation. The maximum number of points on the Beck scale is 38, the risk of suicide is higher, the greater the total score obtained during the interview.

The B. Luban-Plozza questionnaire includes 2 answers (“Yes” or “No”) to 16 questions that are entered on the registration form. The risk of suicide is higher, the more “Yes” answers to questions 1-11 (suicidal risk factors) and “No” answers to questions 12-16 (anti-suicidal factors).

Testing was carried out in two groups of patients: group 1 consisted of 27 patients with disabilities, group 2 – 15 patients who did not have a disability due to liver disease. The period of direct observation of the features of suicidal behavior in patients with liver cirrhosis was 7 months.

Research results

The study of the features of suicidal behavior in those examined during the period of direct observation showed that only in 26 (64.0%) patients it was limited to

the appearance of suicidal thoughts without the formation of suicidal intentions. In 8 (18.0%) patients, more pronounced suicidal tendencies were observed in the form of suicidal intentions 4 (9.0%), suicidal attempts 4 (9.0%).

When tested using the Beck scale, it was found that in 22.7% of patients passive suicidal thoughts arose with a frequency of 1 to 4 times a week, 23.7% of patients reported the occurrence of suicidal intentions at least 6 times a week. At the same time, 18.8% of patients noted that they had suicidal thoughts and intentions for more than 30 minutes daily. It was easy to control suicidal thoughts in 51.8% of patients, 60.9% of patients reported that family, religion, understanding of the irreversibility of death were deterrents for the realization of suicidal intentions.

As the main reason for the alleged suicide attempt, patients called the desire to end all suffering, immediately solve all problems. At the same time, 48.6% of patients were especially worried about the irreversibility and progression of their disease with a large number of hospitalizations over the past year, including in the intensive care unit, and extremely short-term remissions, and 44.8% of patients about such complications of liver cirrhosis like jaundice, ascites, encephalopathy, bleeding from esophageal varices. When committing suicide attempts, the choice of the method of suicide was influenced, first of all, by its availability. In particular, out of 4 patients who made a suicide attempt, 2 patients resorted to self-poisoning with drugs 1 patient mixed chlorine into food, 1 patient tried to commit suicide with an alcohol overdose.

Analysis of patient testing results using the B. Luban-Plozza questionnaire showed that the frequency and severity of suicidal tendencies showed statistically significant differences between groups of patients with and without liver cirrhosis disability. In particular, during 7 months of direct observation, the likelihood of suicidal thoughts in patients with a disability due to liver cirrhosis was 2.35 times higher than in the group of patients without disabilities (RR 2.29; 95% CI 1.44 -3.88). The distribution of patients depending on the severity of suicidal tendencies is shown in Table 1.

Table 1

Distribution of patients depending on the severity of manifestations of suicidal tendencies

Form of suicidal behavior	Having a disability for cirrhosis of the liver		Non-disabled for liver cirrhosis		Total	
	abs.	%	abs.	%	abs.	**%**
Passive suicidal thoughts	16	59,0	11	74,0	27	64,0
Suicidal thoughts	3	11,0	3	20,0	6	14,0

Suicidal Intentions	4	15,0	1	6,0	5	12,0
Suicide attempt	4	15,0	-	-	4	10,0
Completed suicide	-	-	-	-	-	
Total	27	100	15	100	42	100

In patients with newly diagnosed liver cirrhosis disability, the occurrence of suicidal tendencies was observed already during the first 3 months of disability (RR 2.59; 95% CI 1.20–5.60), especially among patients in aged 45–62 years (RR 3.72; 95% CI, 1.45–9.56). Moreover, the suicidal risk remained high throughout all 7 months of direct observation.

Indicators of the risk of suicidal behavior depending on the time elapsed after the establishment of disability for liver cirrhosis are presented in Table 2.

Table 2

Indicators of the risk of suicidal behavior depending on the time elapsed since the establishment of disability for cirrhosis of the liver

Time elapsed since the establishment of disability	Indicators of the risk of suicidal behavior
1 month	0,16 (0,08–0,31)
2 month	0,22 (0,12–0,38)
3 month	0,44 (0,22–0,62)
4 month	0,54 (0,35–0,87)
5 month	0,72 (0,42–1,11)
6 month	0,79 (0,46–1,18)
7 month	0,89 (0,57–1,27)

Examination using the Hospital Anxiety and Depression Scale (HADS), which measures the severity of these emotional manifestations, also showed the presence of statistically significant differences between groups of patients with and without disability in cirrhosis liver rose. The distribution of patients depending on the indicators of the frequency and severity of anxiety and depression is shown in Table 3.

Table 3.

Distribution of patients depending on the indicators of the frequency and severity of anxiety and depression

Level of anxiety or depression	Disability for cirrhosis of the liver (%)		Disability for cirrhosis of the liver (%)		Total (%)	
	Anxiety	Depression	Anxiety	Depression	Anxiety	Depression
Lack of anxiety and depression	9.4	28.0	18.1	9.7	27,5	37,7
Subclinical anxiety/Depression	14.4	20.1	24.3	13.1	38,7	33,2
Clinical anxiety/ Depression	41.3	44.9	22.9	11.7	64,2	56,6

The data in the table show that among patients with established disabilities, clinically defined cases of anxiety and depression were significantly more common than among patients without liver cirrhosis. Anxiety was clinically manifested by a constant feeling of internal tension, the expectation of misfortune, thoughts of imminent death, at times a feeling of panic with restlessness and a desire to move. Depression at the clinical level was characterized by depression of mood, anhedonia, slowness of movements, a pessimistic assessment of the future against the background of severe somatogenic asthenia.

The data obtained allow us to draw a parallel between the stage of liver cirrhosis and the severity of emotional disorders, the severity of which reveals a direct relationship with the severity of the consequences and clinical prognosis of liver cirrhosis. The establishment of disability serves as proof for patients of the irreversibility and incurability of their disease, causes a feeling of hopelessness, exacerbates a pessimistic assessment of the future and contributes to the formation of suicidal tendencies. It can be considered that patients with established disability had a higher level of psychological stress than patients without disability due to liver cirrhosis. Moreover, the greatest differences between these groups concerned the frequency and severity of depressive disorders. Patients in the stage of decompensation of liver cirrhosis (terminal stage) had the highest rates of depression. It is interesting to note that patients who received drug treatment were significantly less anxious and less depressed than patients who did not receive such treatment. It was not possible to find a significant relationship between the severity of anxiety and depression and the age, gender and level of education of patients.

Our results suggest that screening for suicidal tendencies and psychological support to prevent suicidal ideation is necessary for all patients with liver cirrhosis, immediately or early after diagnosis, especially in patients of relatively young age. This is due to the fact that with newly diagnosed cirrhosis, patients are worried about the physical manifestations of the disease and are frustrated by its incurability without a liver transplant. Therefore, medical services for the treatment of liver disease should be complemented by services for the psychological and social support of patients. Prevention of emotional disorders and suicidal behavior should be carried out during the first year after the diagnosis of liver cirrhosis, but becomes especially important after the patient's disability.

If sufficiently pronounced anxiety or depression is detected, measures to stabilize the somatic state must necessarily be supplemented by measures to treat emotional disorders. In this regard, the support system for patients with liver cirrhosis should be comprehensive and include assistance from a hepatologist, psychotherapist or psychiatrist. Given the linear nature of the relationship between the severity of clinical manifestations of liver cirrhosis and emotional disorders, special attention of a psychiatrist is required for those patients who have a disability due to liver cirrhosis. Currently, a mental health center and a regional suicide prevention center operate in the Bukhara region of the Republic of Uzbekistan, which, however, cannot provide specialized assistance in the treatment of liver cirrhosis associated with hepatitis B and C. In our opinion, an integrated approach to the prevention of suicidal behavior in patients with cirrhosis of the liver should be carried out in outpatient and inpatient units of somatic hospitals with the involvement of psychotherapists or psychiatrists as consultants.

Conclusions

1. Patients suffering from cirrhosis of the liver are at high risk of suicidal behavior, especially at a relatively young age, in the early period after diagnosis and disability.
2. Suicidal behavior in patients with liver cirrhosis is determined by anxiety and depression, the frequency and severity of which correlate with the severity of clinical manifestations and the prognosis of liver disease.
3. Suicide in patients with cirrhosis of the liver is a consequence of psychological distress caused by concerns about the irreversible and progressive nature of their disease, the low effectiveness of treatment and the high frequency of life-threatening complications.
4. The provision of psychological support to prevent emotional disorders and suicidal behavior in liver cirrhosis should begin early after diagnosis and disability and be carried out in combination with measures to treat liver disease.

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