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Profile of Liver Cirrhosis Patients at Imelda Pekerja Indonesia General Hospital (RSU IPI) Period January 2020 – December 2021

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A B S T R A C T

Liver cirrhosis is the result or complication of a chronic liver condition where the liver parenchyma is damaged so that its function decreases. This study aims to study the profile of patients with liver cirrhosis at the Imelda Pekerja Indonesia General Hospital in Medan for the period January 2020 - December 2021. This study is a descriptive observational study. A total of 40 samples of medical records of patients with a diagnosis of liver cirrhosis at the Imelda Pekerja Indonesia General Hospital in (IPI) Medan were included in this study. Univariate analysis in the form of frequency distribution data tabulation was used to present the data. The results showed that most patients with liver cirrhosis were male (72.5%), aged 56-65 years (32.5%), and the main complaint was nausea and vomiting (47.5%). The most physical examination results were ascites (52.5%), abnormal lab results were increased SGPT (75%), SGOT (80%), total bilirubin (85%), prothrombin time (75%) and decreased albumin (85%) and Hb (55%), most of the patients were in the category of Child-Pugh Score B (37.5%) and C (37.5%), and the most complication was hepatorenal syndrome (55%). In conclusion, the profiles of patients with liver cirrhosis are mostly male, aged 56-65 years, with the most complaints of nausea and vomiting and the most physical examination findings of ascites. There was an increase in SGPT, SGOT, total bilirubin, and prothrombin time, as well as a decrease in albumin and Hb.

1. Introduction

Cirrhosis is understood as a final evolutionary stage of all progressive liver disease, regardless of what causes it.[1] In western countries, the most common cause of cirrhosis is alcohol consumption. While in Indonesia, liver cirrhosis is mainly caused by chronic hepatitis B and C. The liver is responsible for various important physiological processes in the body, including the formation of bile and its excretion into the digestive tract, the process of carbohydrate, fat, and protein metabolism, blood filtration, and the elimination of foreign substances that are toxic to the body.[2] The condition of liver cirrhosis can reduce the quality of life, cause the inability to work, and the sufferer requires long-term care.[3] Enforcement of the diagnosis of liver cirrhosis is done through a historical process, followed and supported by a physical examination and supporting. At the time of history taking, the examiner should find out about the history of risk factors that predispose the patient to cirrhosis. Conditions that are often found on physical examination of patients with liver cirrhosis include ascites, jaundice, edema, and anemia. Investigations that can be done are liver biopsy and laboratory and radiological examinations. On laboratory examination, we usually found an increase in SGPT, SGOT, bilirubin, and prothrombin time, while albumin and

Hb decreased.

To determine the category or phase of liver cirrhosis, the Child-Pugh Score. The results of the score calculation are then categorized into categories A, B, and C, where category A is the early phase or compensated liver cirrhosis, while categories B and C are said to be advanced or decompensated liver cirrhosis.[4] Compensated and decompensated cirrhosis are characterized by very different clinical conditions in which patients with compensated cirrhosis have a much greater life expectancy, are usually asymptomatic, and have the quality of life than patients with decompensated cirrhosis. Decompensation occurs due to increased portal pressure, bacterial translocation, inflammation, and hyperdynamic circulation. These things make the condition of cirrhosis progress to an advanced decompensated phase and are characterized by decreased liver function.[5] Cirrhosis is one of the leading causes of death and comorbidities in the world. Cirrhosis ranks 11th as a cause of death and ranks 15th as a cause of morbidity, where deaths due to cirrhosis were recorded at around 2.2% worldwide in 2016. The prevalence of liver cirrhosis in general government hospitals in Indonesia is 3.5% of all patients in the internal medicine room.[6] The high mortality rate of cirrhosis patients can be caused by the cirrhosis process itself, but it is not uncommon for death to be caused by the onset of complications.[7] Some of the complications often experienced by people with cirrhosis include hepatorenal syndrome, spontaneous bacterial peritonitis, esophageal varicose veins, and hepatic encephalopathy.[8] The main therapy used for the long-term management of cirrhosis is pharmacological therapy based on complications.[9] Understanding and identifying the course and development of the clinical condition of a cirrhosis patient is very beneficial in determining what management can be given to prevent the condition from continuing to develop. This study aims to study the profile of liver cirrhosis patients at Imelda Pekerja Indonesia General Hospital Medan for the period January 2020 - December 2021.

2. Methods

This study is a descriptive observational study that describes the profile of patients with liver cirrhosis at Imelda Pekerja Indonesia General Hospital Medan for the period January 2020 - December 2021. This study uses secondary data sourced from medical colleagues. A total of 40 medical records of respondents were included in this study. This study has received ethical approval from the Health Research Ethics Commission (KEPK) Universitas Prima Indonesia Number: 035/KEPK/UNPRI/III/2022. Descriptive data analysis in this study includes a study of the frequency and distribution of samples based on demographic data, history taking, physical examination results, laboratory examination results, classification, and complications presented in the form of distribution tables.

3. Results and Discussion

In Table 1, it was found that most patients with liver cirrhosis were male, with a total of 29 out of 40 people, which was 72.5%. Meanwhile, the number of female liver cirrhosis patients was 11 people, which was 27.5%. Based on age, it was found that liver cirrhosis patients were most commonly found in the age range of 56-65 years, then the age range of 46-55 years, then over 65 years, then in the range of 35-45 years, and the last one under the age of 35 years. by 13 people (32.5%), 11 people (27.5%), 7 people (17.5%), 5 people (12.5%), and 4 people (10%) respectively. Table 2 shows that the most common complaints encountered during the history-taking were nausea and vomiting in as many as 19 people (47.5%), followed by fatigue in as many as 16 people (40%), shortness of breath in as many as 12 people (30%), then black stools. Urination with strong tea color, liver pain in 10 people (25%), and vomiting blood in 4 people (10%). In Table 3, it was found that 21 people (52.5%) had ascites, and 19 people (47.5%) did not. Furthermore, edema was found in 17 people (42.5%) and not found in 23 people (57.5%). Furthermore, 11 people (27.5%) were found to have jaundice, while 29 people (72.5%) were found not to

have jaundice. A total of 17 people (42.5%) were found to be anemic, while 23 people (57.5%) were found not to be anemic. Table 4 shows that the results of laboratory tests that have increased are SGPT, SGOT, total bilirubin, and prothrombin time in as many as 30 people (75%), 32 people (80%), 34 people (85%), and 30 people (75%) sequentially. At the same time, the results of laboratory examinations that decreased were albumin in as many as 34 people (85%) and Hb in as many as 22 people (55%). Creatinine values tend to be normal for as many as 25 people (62.5%). Based on Table 5, the highest frequency of liver cirrhosis patients in this study was in the Child-Pugh Score B and C classifications, each of which was 15 people (37.5%), followed by 10 people in the Child-Pugh Score A classification (25%). From Table 6, it was found that hepatorenal syndrome was the most common complication in as many as 22 people (55%), followed by Esophageal Varices in as many as 19 people (47.5%), then hepatic encephalopathy in 4 people (10%), and no None of the patients in this study had complications of spontaneous bacterial peritonitis (0%).

Table 1. Demographic characteristics of liver cirrhosis patients.

Age (Years)	**n (person)**	**%**
<35	4	10
35 – 45	5	12.5
46 – 55	11	27.5
56 – 65	13	32.5
>65	7	17.5
Gender		
Male	29	72.5
Female	11	27.5
Total	**40**	**100**

Table 2. Characteristics of liver cirrhosis patients based on anamnesis results.

Anamnesis results	**n (person)**	**%**
Easily tired		
Yes	16	40
No	24	60
Vomiting blood		
Yes	4	10
No	36	90
Nausea vomiting		
Yes	19	47,5
No	21	52,5
Black stools		
Yes	10	25
No	30	75
Shortness of breath		
Yes	12	30
No	28	70
Strong tea urination		
Yes	10	25
No	30	75
Heartburn		
Yes	10	25
No	30	75
Total	40	100

Table 3. Characteristics of liver cirrhosis patients based on physical examination.

Physical Examination	n (person)	%
Ascites		
Yes	21	52,5
No	19	47,5
Oedema		
Yes	17	42,5
No	23	57,5
Jaundice		
Yes	11	27,5
No	29	72,5
Anemic		
Yes	17	42,5
No	23	57,5
Total	40	100

Table 4. Characteristics of liver cirrhosis patients based on laboratory examinations.

Laboratory examinations	n (person)	%
SGPT/ALT		
Decreased (<5 U/L)	0	0
Normal (5-35 U/L)	10	25
Increase (>35 U/L)	30	75
SGOT/AST		
Decrease (<5 U/L)	0	0
Normal (5-35 U/L)	8	20
Increase (>35 U /L)	32	80
Albumin		
Decreased (<3.5 g/dl)	34	85
Normal (3.5-5 g/dl)	6	15
Increased (>5 g/dl)	0	0
Total Bilirubin		
Decreased (<0.3 mg /dl)	1	2.5
Normal (0.3-1.0 mg/dl)	5	12.5
Increase (>1 mg/dl)	34	85
Prothrombin Time		
Decreased (<10 s)	0	0
Normal (10-15 s)	10	25
Increased (>15 s)	30	75
Creatinine		
Decreased (<0.6 mg/dl)	3	7.5
Normal (0.6-1.3 mg/dl)	25	62.5
Increased (>1.3 mg /dl)	12	30
Hb		
Decreased (LK: <13 g/dl; PR: <12 g/dl)	22	55
Normal (LK: 13-18 g/dl; PR: 12-16 g/dl)	18	45
Increased (LK: >18 g/dl; PR: >16 g/dl)	0	0
Total	**40**	**100**

Table 5. Characteristics of liver cirrhosis patients based on classification of the Child-Pugh Score.

Child-Pugh Score	n (person)	%
A (5-6 points)	10	25
B (7-9 points)	15	37.5
C (10-15 points)	15	37.5
Total	40	100

Table 6. Characteristics of liver cirrhosis patients based on complications.

Complications	n (person)	%
Esophageal varices		
Yes	19	47,5
No	21	52,5
Spontaneous Bacterial Peritonitis (SBP)		
Yes	0	0
No	40	100
Hepatorenal syndrome		
Yes	22	55
No	18	45
Hepatic encephalopathy		
Yes	4	10
No	36	90
Total	40	100

The complications found in this study were Hepatorenal Syndrome, which was 22 people (55%), followed by Esophageal Varicose Veins in as many as 19 people (47.5%), and Hepatic Encephalopathy in as many as 4 people (10%). Hepatorenal syndrome is defined as a secondary renal function disorder that occurs in patients with severe liver function disorders, regardless of acute or chronic.[10] Esophageal varicose veins are the presence of swelling of the veins in the mucous layer in the lumen of the esophagus.[11] Meanwhile, hepatic encephalopathy is a condition of loss of consciousness due to disorders in the liver. Physiologically, one of the functions of the liver is to detoxify ammonia into urea to be excreted by the kidneys.[12] Decreased liver function increases ammonia levels, and this is what causes impaired consciousness.[13]

4. Conclusion

Most patients with liver cirrhosis are male, aged 56-65 years, with the most complaints of nausea and vomiting, and the most physical examination findings are ascites. There was an increase in the value of SGPT, SGOT, total bilirubin, and prothrombin time, as well as a decrease in albumin and Hb values in patients with liver cirrhosis. Creatinine levels tend to be normal. Most patients with liver cirrhosis who go to the hospital are in the Child-Pugh B and C categories with the most complications from the hepatorenal syndrome.

5. References

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