



Science

LIVER CIRRHOSIS - STATISTICAL ANALYSIS DATA IN A 5 YEAR PERIOD IN PRILEP, REPUBLIC OF NORTH MACEDONIA



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Abstract

Liver cirrhosis is defined as a diffuse process, which is characterized by fibrosis and the conversion of normal liver architecture to abnormal nodules. For the purposes of this paper was used data from the Institute for Public Health in Prilep, Republic of North Macedonia in the period of 2014 to 2018. The data were analyzed and processed epidemiologically, descriptively and statistically. The total number of hospitalized patients in the analyzed period is 107 patients. The highest number of cases was registered in 2015 with 31 patients ie 29% and the lowest number in 2018 with 9 patients or 8%. According to gender, cirrhosis affected men more - 79 patients (74%) than women - 28 patients (26%). According to the age structure, the most of the cases were from 55 to 64 years old – 55 patients (51%). According to the etiological distribution, alcohol is the main cause of cirrhosis in Prilep region - 59 cases (55%). According to the hospitalization ie the number of hospital days, over a period of 5 years the number of hospital days is 432. In other patients the exact cause of cirrhosis has not been established. Analysis shows that the risk and severity of liver complications endanger life and quality of life and increase morbidity and mortality.

Keywords: Cirrhosis; Liver; Complications; Analysis.

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1. Introduction

Liver cirrhosis is defined as a diffuse process, which is characterized by fibrosis and the conversion of normal liver architecture to abnormal nodules. The main mechanisms for cirrhosis are hepatocyte death, regeneration, advanced fibrosis and vascular changes. The development of cirrhosis requires a cellular injury to occur over a long period of time and be accompanied by fibrosis.

Symptoms vary greatly depending on etiopathogenesis, stage of the disease and the disease process activity. According to the clinical classification, cirrhosis may be latent and manifested. The manifested may be active and inactive, compensated and decompensated. Latent cirrhosis is detected by accident without any complications, but which has clinical features and/or biochemical changes. It is defined as manifested cirrhosis when it has subjective symptoms as a result of the two underlying syndromes - portal hypertension and liver failure. In the compensatory stage patients complain of heaviness in epigastrium, nausea, vomiting, fatigue or insomnia. At the stage of decompensation, the clinical symptoms of advanced liver disease develop and are manifested as fatigue, weakness, weight loss, sub fibrillar fever, icterus, ascites, skin changes, endocrine changes, hepatic fever, hemorrhagic tendency, portal hypertension, hepatic encephalopathy and hepatomegaly.

Diagnosis of cirrhosis of the liver is based on medical history, physical examination and additional clinical examinations. The only reliable method for diagnosis of liver cirrhosis is liver biopsy. A biopsy may show the cause of cirrhosis. The treatment of cirrhosis depends on the cause and extent of the liver damage. The goals of treatment are to slow down the progression of scar tissue in the liver and prevent or treat symptoms and complications of cirrhosis. Overall management of decompensated cirrhosis can be resolved using two methods. The first method is suppression of etiological factors that cause liver inflammation and development of cirrhosis, while the second method is based on targeting the key factors of the pathogenesis of decompensation and progression of cirrhosis. In advanced cases of cirrhosis, when the liver stops functioning, liver transplantation may be the only treatment option. Cirrhosis is one of the most common reasons for liver transplantation.

Complications in liver cirrhosis are the result of portal hypertension, liver failure or a combination of both. The main consequences of portal hypertension include: ascites, varicose veins, hepatic encephalopathy, hepato-pulmonary hypertension, hepatocellular carcinoma, hepato-renal syndrome, spontaneous bacterial peritonitis and coagulation disorders. [1-6]

2. Material and Methods

In this research were taken data from the Center of Public Health in Prilep, Republic of Macedonia, for the period from 2014 to 2018. The data are analyzed and processed epidemiologically, descriptively and statistically. Patient selection was based on a baseline diagnosis of cirrhosis of the liver (ICD-k70.3 alcoholic cirrhosis, k74.6 another and unspecified cirrhosis).

3. Results and Discussions

In the analyzed period from 2014 to 2018 at Prilep General Hospital, a total of 107 patients with cirrhosis were hospitalized. The results are shown in tables and graphs.

Table 1: Total number of hospitalized patients from 2014 to 2018.

Year	2014	2015	2016	2017	2018
Number of hospitalized patients	26	31	28	13	9
Total	107				

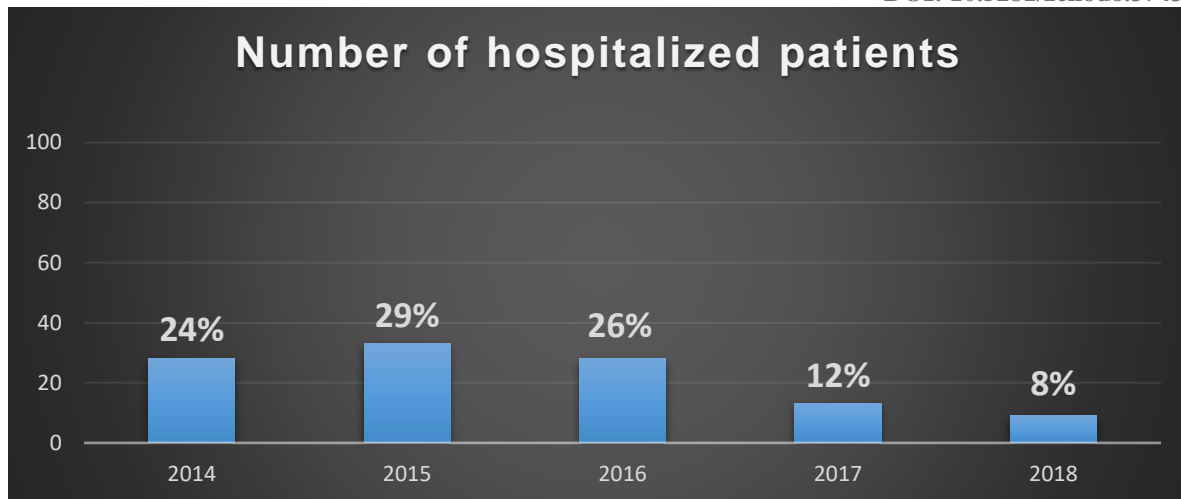


Chart 1: Total number of hospitalized patients

From the results shown in table 1 and chart 1, there is a decrease in the number of hospitalized patients by years.

The highest number of hospitalized patients was in 2015, total 31 (29%) of which 20 were male and 11 were female (65% male and 35% female).

According to the gender distribution, 79 are men (74%) and 28 are women (26%). There was a statistically significant difference in the distribution of patients by gender.

Table 2: Structure of the examinees according to gender

GENDER	MALE	FEMALE
Number of hospitalized	79	28
Total	107	

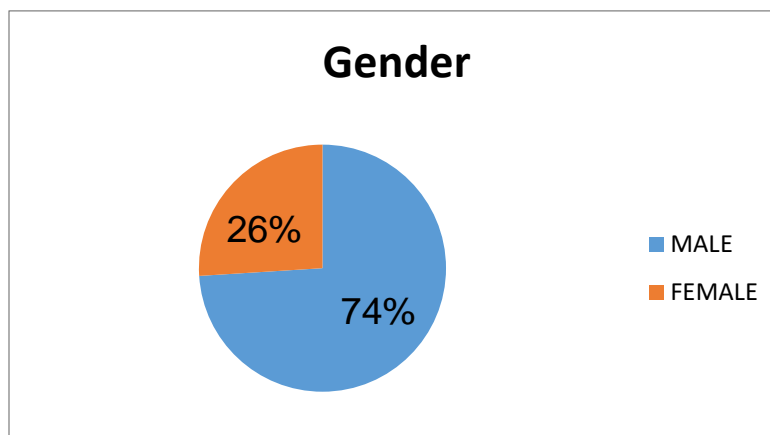


Chart 2: Structure of the examinees according to gender

According to the age structure, the results showed that the most common age group is from 55-64 years with 55 registered patients (51%), and the least affected are from the age category 35-44 years with 1 patient (0.9%).

Table 3: Structure of respondents by age

Age structure	30 – 34 year	35 - 44 year	45 - 54 year	55 – 64 year	65 - 74 year	75 – 84 year
Total	1	2	12	55	31	6

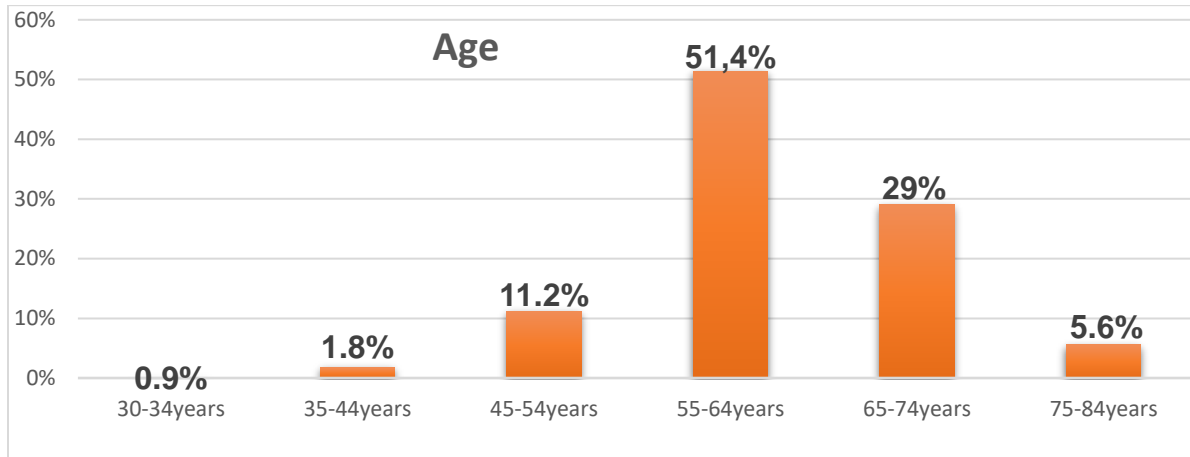


Chart 3: Structure of respondents by age

Of the total number of hospitalized patients, the etiological distribution of cirrhosis of the liver is as follows: 59 patients - alcoholic and under code [ICD 10 K70.3 Alcoholic cirrhosis] and 48 patients - The exact cause is not known and are classified under the code [K74.6 Another] and unknown cirrhosis according to [ICD 10 classification].

Table 4: Etiological distribution

Etiology of cirrhosis	Total	Male	Female
Alcoholic cirrhosis	59 (55%)	55 (93%)	4 (7%)
Unknown cirrhosis	48 (45%)	24 (50%)	24 (50%)
Total	107 (100%)	79 (74%)	28 (26%)

From the results shown in table 4 it can be noticed that alcoholic cirrhosis is present in 55%, while the unknown cirrhosis is present in 45%. According to gender, alcohol cirrhosis is present in 93% of men and 7% of women. In terms of unknown cirrhosis it is equally present in both genders.

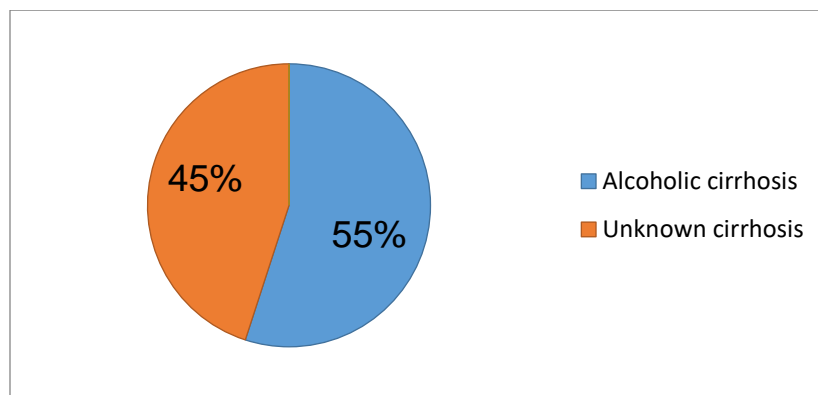


Chart 4: Etiological distribution

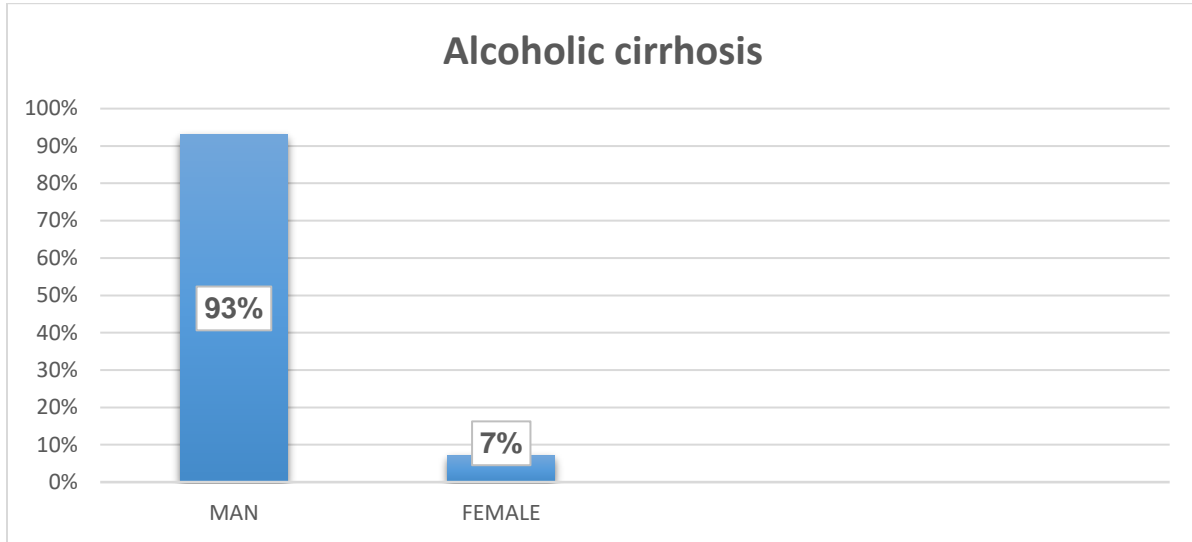


Chart 5: Alcoholic cirrhosis by gender

According to the results shown in chart 5, it can be concluded that there is a statistically significant difference in cirrhosis patients by gender.

A total of 42 patients (39%) had some of the complications shown in table 5.

Table 5: Complications of hospitalized patients

Complications	N	%
Ascites	26	62%
Variceal bleeding	15	36%
HRS	1	2%

Most patients have ascites (26), varicose vein (15), and hepato-renal syndrome (1 patient).

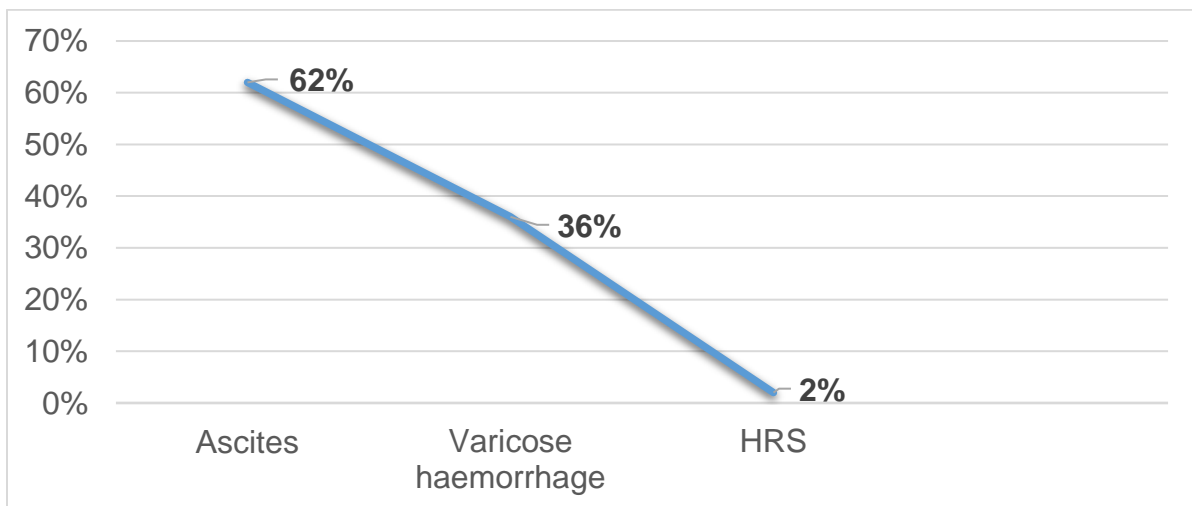


Chart 6: Complications of hospitalized patients

4. Conclusion

According to the analysis it can be concluded that the risk and severity of liver complications endanger life and quality of life, as well as increase morbidity and mortality. Knowing the key pathophysiological mechanisms today enables to counter the progression of cirrhosis and so prevent its complications. Based on the results of the research the number of liver cirrhosis in Prilep region is declining. Alcohol is the main cause and the disease most commonly occurs in men. It should therefore be emphasized that alcohol removal may prevent the progression of cirrhosis and its complications.

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