Clinical characteristics and palliative needs of patients with non-oncological liver failure care in a palliative care service

Características clínicas y necesidades paliativas de pacientes con insuficiencia hepática no oncológica atendidos en un servicio de cuidados paliativos

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Summary

Liver failure is the fourth leading cause of death in Mexico. Treatment is exclusively symptomatic support, since the only curative therapy is liver transplantation, and Mexico is one of the countries with the fewest transplants worldwide, making the inclusion of early palliative care vital. The aim of this article is to describe the clinical characteristics and palliative needs of patients with non-oncologic liver failure in the palliative care service of the Hospital Gea González. An observational and retrospective study was carried out, of 80 records of patients with non-oncologic liver failure, attended from January 2021 to June 2023. All patients required palliative care, according to the palliative needs scale (NECPAL), and 80% had advanced chronic disease criteria, the main etiology being alcoholism. The need to include an early palliative care program is justified, which will have a lesser economic, social and psychological impact on Mexican families.

Keywords: palliative care, alcoholism, mortality.

1. Introduction

The term cirrhosis comes from the Greek word *Kippóskitplvos* which means yellow color. Since the time of the Greeks and Romans, the decrease in size and hardening of the liver was recognized. In 1543, Vesalius was the first to suggest that alcohol could affect the liver. According to the WHO definition, cirrhosis of the liver (CH) is a diffuse process characterized by fibrosis and conversion of the normal liver structure into an abnormal nodular arrangement (1). Liver failure or cirrhosis is defined as the histologic development of regenerative nodules surrounded by fibrous bands in response to chronic liver damage leading to portal hypertension and end-stage liver disease.

Fibrosis describes the encapsulation or replacement of damaged tissue by a collagen scar. Fibrosis in the liver results from abnormal fibrogenesis, cirrhosis is the advanced stage of liver fibrosis and is

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accompanied by distortion of the hepatic vasculature. The major clinical consequences of cirrhosis are altered hepatocyte function, as well as increased intrahepatic resistance, portal hypertension, and the development of hepatocellular carcinoma (2).

It is a frequent chronic entity, it is one of the ten first causes of death in people between 18 and 55 years old, constituting the most common reason for consultation in gastroenterology and hepatology. Liver function failure is one of the most complex clinical syndromes in human pathophysiology. Cases of liver failure are thought to be underestimated, as many people live with cirrhosis histologically, before presenting symptoms (2,3). In the last decades, it has become a public health problem, despite being largely preventable, with worrying mortality and morbidity figures, in Mexico it represents one of the main causes of death and disability and it is expected to continue to be so in the following years. In the United States, mortality due to liver cirrhosis has increased year by year; from 1999 to 2016, 460,760 deaths due to non-oncological causes were registered, being the male sex those who presented higher mortality; besides observing an increase in the younger population, from 25 to 34 years old, due to alcohol use and abuse (5). In our country it occupies the fourth cause of mortality, being the states with the highest prevalence Hidalgo, Puebla, Tlaxcala, State of Mexico and Mexico City, that is, the center of the republic. In the Hospital Juarez de Mexico, it occupies 11% of global mortality and the first cause of hospital admission in the gastroenterology service (1). It also implies premature death, with more than 95% of health loss at state and national level, with alcohol and hepatitis C virus being the predominant causes. Alcoholism accounted for 80% of the causes in men (4).

The natural history of cirrhosis is silent, asymptomatic until portal pressure increases and liver function decreases, at which time symptoms appear. In the compensated disease phase, which is usually asymptomatic, patients can have a good quality of life and the disease will go unnoticed for many years. The median survival of compensated cirrhosis has been reported to range from 10 to 12

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years. Progression is marked by the appearance of clinical signs, the most frequent being ascites, bleeding, encephalopathy and jaundice. Once the first symptoms appear, the disease has a rapid progression, where the only two options are death or liver transplantation (6). The progression of the disease is also accelerated by the development of complications such as renal failure due to hepatorenal syndrome, ascites refractory to treatment, hepatopulmonary syndrome and sepsis due to spontaneous bacterial peritonitis, as well as the development of hepatocarcinoma (7).

The etiology of chronic liver failure or cirrhosis is variable; in western countries, 90% of the origin is due to alcohol abuse, followed by non-alcoholic fatty liver disease, as a manifestation of obesity and metabolic syndrome; on a worldwide scale, viral hepatitis due to hepatitis B and C virus represent the most important etiology (7). In Mexico, epidemiological information is isolated and scarce; a 2020 study indicated that the main cause was chronic alcohol consumption, followed by viral diseases, autoimmune disease, and finally the cryptogenic cause; it was also found that there are socioeconomic and cultural factors with liver cirrhosis, for example, in the male sex and with ethylic etiology, the most frequent level of schooling was high school.

There are prognostic models to establish the severity of the diseases, as well as the expected survival; with respect to liver failure, the most useful ones are the Child-Pugh classification and the MELD model. For more than 50 years the need to classify this disease has arisen, the most widely accepted being the Child Pugh classification, initially used for patients after undergoing portosystemic shunts, later for prognosis and admission to the transplant list of patients. Using the levels of albumin, bilirubin, prothrombin time, INR, presence of ascites and presence of encephalopathy, it is the most widely used method to assess vital prognosis in liver failure, although it may be biased since, for example, it is classified equally for a patient with bilirubin 5 mg/dl to one with 30 mg/dl, and the presence of the degree of ascites or encephalopathy also depends

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on the observer. However, it is inexpensive and non-invasive, so it continues to be used to this day. According to classification A: 5-6 points, it speaks of a one-year survival of 100%, in classification B: 7-9 points it has a one-year survival of 80% and in classification C: 10-15 points with a one-year survival of 45% (9).

Due to the limitations mentioned in the Child-Pugh scale, where there are subjective parameters, the need for a more adequate prognostic index arose in the Mayo Clinic, the MELD model (Model for End-Stage Liver Disease), and although it was initially used for the survival of portosystemic shunts, its use has been validated for patients with end-stage liver disease, has been validated for use in chronic patients and prioritization in the transplant list includes three laboratory variables, including INR, serum creatinine and bilirubin, subsequently including these values with a mathematical formula and logarithms. Depending on the score obtained, which ranges from 6 (best prognosis) to 40 (worst prognosis), mortality at 3 months can be estimated, the highest value being 40 points, with mortality of 71.3% at 3 months (10).

In the United States, end-stage liver disease is one of the top ten causes of death, is associated with many symptoms, with frequent hospitalizations and mortality similar to cancer, in addition to a frank deterioration in quality of life and immense burden on the caregiver. The only curative treatment is liver transplantation, but it is available for very few patients with the disease, and the behavior of the disease is uncertain and can have catastrophic results in a short time; thus, there is an urgent need to improve the quality of life of patients and care in general. Thus, palliative care has been shown to reduce costs of care, improve quality of life, and align goals of care between the patient and caregivers. There are data on the poor use of palliative care in end-stage liver disease, as it is still stigmatized with giving up and in the area of hepatology, physicians do not know about palliative care in this type of patients, and there are very few professionals trained in palliative care (11).

Palliative care is a specialized area of medicine that focuses on improving the quality of life in patients and families facing serious,

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life-threatening illnesses, including management of pain and other physical symptoms, as well as spiritual and psychosocial support. In addition, it assists the patient and family with long-term care plans, prognostic awareness and end-of-life counseling. It also allows patients to go home earlier and dramatically reduces hospital care costs. According to the who, more than 1 million people in Latin America alone need palliative care. In Mexico, it is estimated that 52% of the population needs palliative care (12).

Cirrhosis is characterized by a rapid progression leading to death, in the United States it affects more than 633,000 people, and being that the only curative treatment is liver transplantation, many patients who will not benefit from an organ will have significant suffering and much overload on the primary caregiver. In addition to the quality of life affected, the large expenditure of health care resources for the care of these patients must also be considered (13). As mentioned, more than 600,000 people are living with cirrhosis in the United States, and it is the second leading cause of gastrointestinal death after colon cancer. These patients are always at risk of death, less than 60% survive two years once the disease has decompensated, and the number of hospitalizations continues to increase, with annual costs of approximately $4 billion per year.

There are many barriers to considering palliative care in patients with cirrhosis and end-stage liver disease. Patients with cirrhosis may not appear to have the disease and may be considered not to require help or to be at risk of dying. The trajectory of liver failure is much less predictable than other diseases, such as cancer, and some symptoms such as ascites or encephalopathy may be well controlled with medications, making end-of-life planning much more complicated. Physicians, patients and also caregivers see palliative care as useful only in the last days of life, and it represents giving up the fight for curative treatment such as transplantation (14). The scales mentioned above, Child Pugh and MELD, are used to guide therapeutic decisions, although in isolation they will not be very useful if they are not complemented by clinical indicators or functionality scales that help to identify the initiation of palliative support (15).

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The NECPAL scale is an instrument for the identification of people with advanced chronic disease, both oncologic and non-oncologic, the need for palliative care, as well as limited life prognosis, was created in a Spanish adaptation through other scales (16). A surprise question is asked Would it surprise you if this patient died in the next 12 months? If the answer is NO, then the NECPAL scale is positive, then it is considered if the patient, caregiver or physician considers that he/she has palliative needs, and if he/she has clinical indicators of severity or progression of his/her base disease, nutritional, functional, two or more comorbidities, or use of resources with several hospitalizations. According to the NECPAL score obtained, which ranges from 1-6, a survival prognosis can be established; stage I (1 to 2 parameters) median survival 38 months, stage II (2 to 3 parameters) median survival 17.2 months and stage III (5-6 parameters) with median survival of 3.6 months (17). Using the Child Pugh and MELD scales, as well as clinical criteria, it is possible to know whether advanced liver disease has terminal criteria and applying the NECPAL scale it is possible to determine whether the patient has palliative needs, in addition to being able to predict survival according to the score obtained.

Palliative care is a human right, it provides the opportunity to have access to the care of competent professionals, in addition to giving the patient the possibility to decide on the treatments he/she wishes, always respecting his/her will and caring for his/her dignity, respecting bioethical principles (non-maleficence, justice, beneficence and autonomy), avoiding extraordinary or futile procedures that will not change the final prognosis. It also allows families who wish to care for their patients at the end of life to have the mechanisms that facilitate the time and economic conditions for their care.

In spite of all the data mentioned above, there are few epidemiological studies in the country describing the characteristics of these patients in order to be able to make preventive plans and interventions and improve their quality of care, especially when the chances of cure are slim. Given the above, the intervention of palliative care

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is of vital importance, especially in the early stages of the disease, as this would result in improving the quality of life and reducing the suffering of the patient and family, planning advanced directives, avoiding unnecessary hospitalizations and saving hospital resources. Therefore, the present study allows us to recognize the clinical and epidemiological characteristics, as well as the palliative needs of patients with this disease.

1. Material and methods

This was an observational, descriptive, retrospective and cross-sectional study, authorized by the Bioethics and Research Committee of the Hospital General Dr. Manuel Gea González, in Mexico City, with registration number 02-47-2023, approved in expedited review by risk-free research criteria, informed consent was not required.

The study population consisted of records of patients with non-oncologic liver failure attended in the pain clinic and palliative care service in the period from January 1, 2021, to June 30, 2023, at the Hospital General Dr. Manuel Gea González. The researchers performed the analysis of records, compiling the information in a database. No sample calculation was performed, since the total number of records in the period was included.

The inclusion criterion was that of records of patients of both sexes with the diagnosis admitted to the palliative care service. The main variables were the Child Pugh, MELD, NECPAL scales, origin of the disease and terminal criteria, in addition to general variables such as age, sex and schooling. The exclusion criterion was that the files did not have complete information.

Data collection was performed in a spreadsheet, and later descriptive statistical analysis was performed with an SPSS program, for the general and main variables, using measures of central tendency, mainly mean, mode and median.

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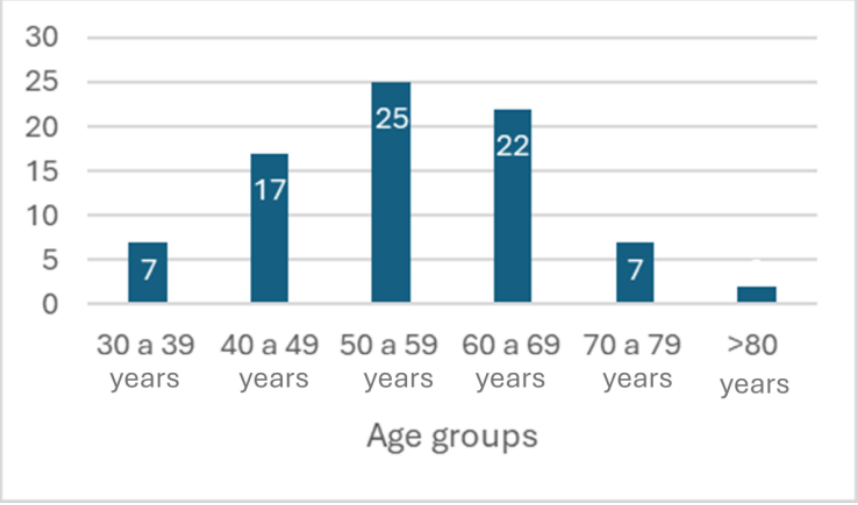
2. Results

A total of 86 files were reviewed, entered into the database of the palliative care service in the indicated period (January 1, 2021 to June 30, 2023), of which 6 were excluded for having an oncologic origin of liver failure, resulting in a total of 80 files. The average age of the patients was 56 years, from the results obtained it could be observed that most of the patients were in the 50 to 59 years age group (31.25%), followed by the 60 to 69 years age group (27.5%), 40 to 49 years (21.25%), 30 to 39 years (8.75%), 70 to 79 years (8.75%) and finally the over 80 years age group (2.5%), as shown in Figure 1.

Figure 1. Frequency of patients by age group



Source: prepared by the author.

Figure 2 shows that, of the total number of patients, 73.75% were men and 26.25% were women, with a predominance of the disease in the male sex.

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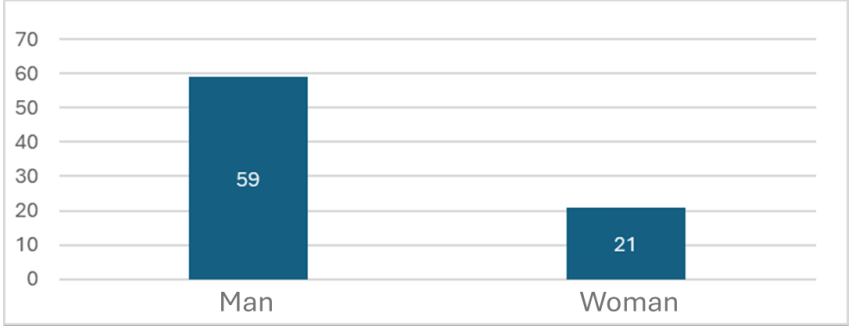
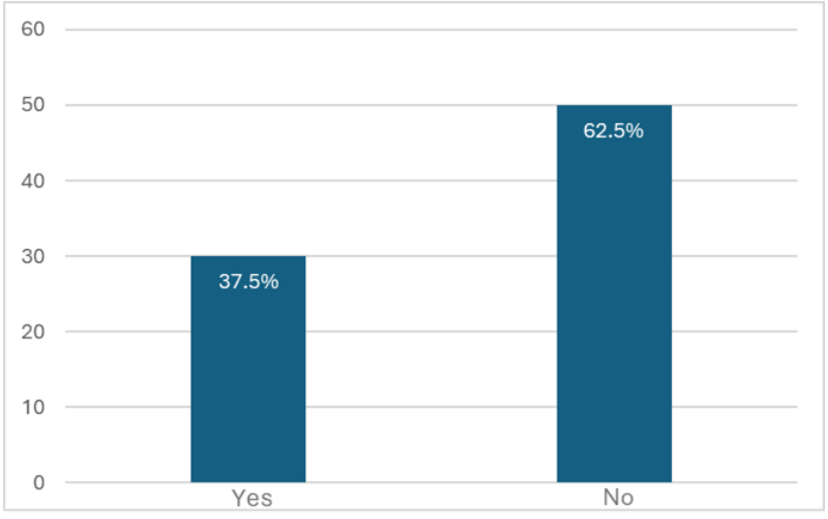
Figure 2. Frequency of patients by sex



Source: prepared by the author.

Figure 3 shows how, according to the population studied, 50 of them did not present comorbidities and 30 did.

Figure 3. Percentage of patients with presence of comorbidity



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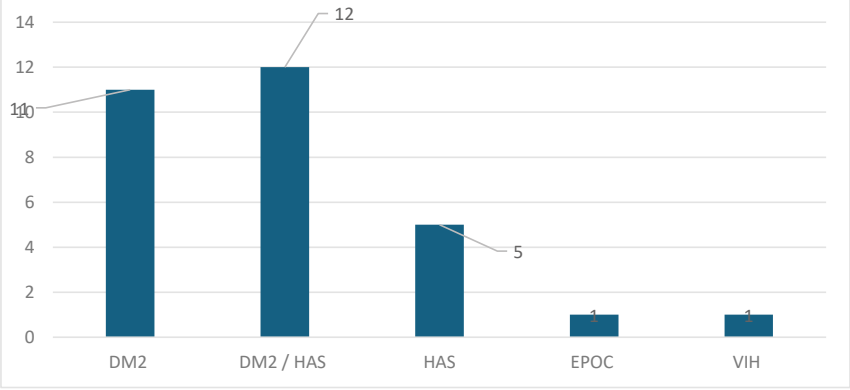
Regarding the type of comorbidity, 40% suffered from type 2 diabetes and systemic arterial hypertension, 36.6% only with type 2 diabetes, 16.6% with systemic arterial hypertension and 3.3% with both Chronic Obstructive Pulmonary Disease (COPD) and Human Immunodeficiency Virus (HIV) as shown in Figure 4.

Figure 4. Frequency of comorbidity type



Source: prepared by the author.

Figure 5 shows that, in relation to the level of schooling of the patients, 60% had basic schooling, followed by 21.2% with higher education, 11.2% with higher education, 7.5% with no schooling and none of the patients had a postgraduate degree.

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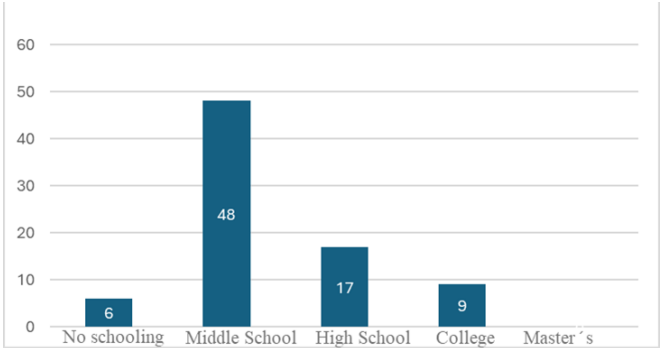
Figure 5. Level of schooling



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Figures 6, 7 and 8 show the origin of the liver failure. It was found that 73.75% of the 80 patients were of alcoholic origin, followed by the cryptogenic cause with 17.5%, 3.75% the viral origin and with 2.5% the autoimmune origin and other causes (non-alcoholic fatty liver disease). With respect to sex and the origin of liver failure, it is noteworthy that, of 59 men, 95% of them had alcoholism as the origin, while in 19 women, 73.6% of them had cryptogenic origin more frequently.

Figure 6. Frequency of the origin of the hepatic failure

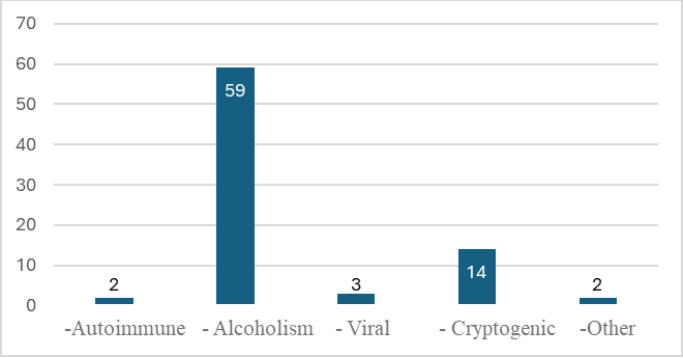

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Figure 7 Frequency of the origin of liver failure in men

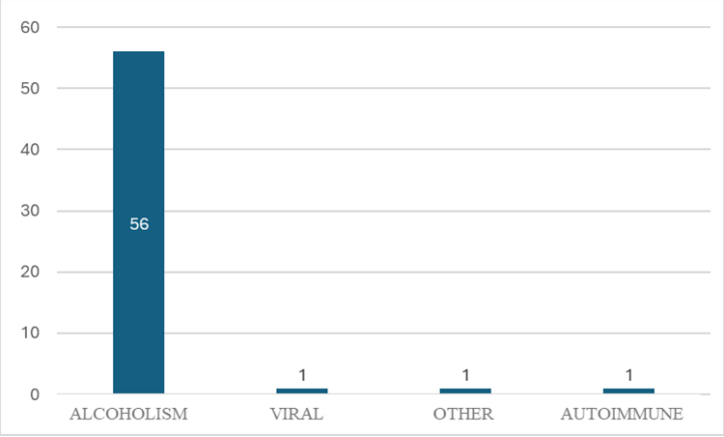

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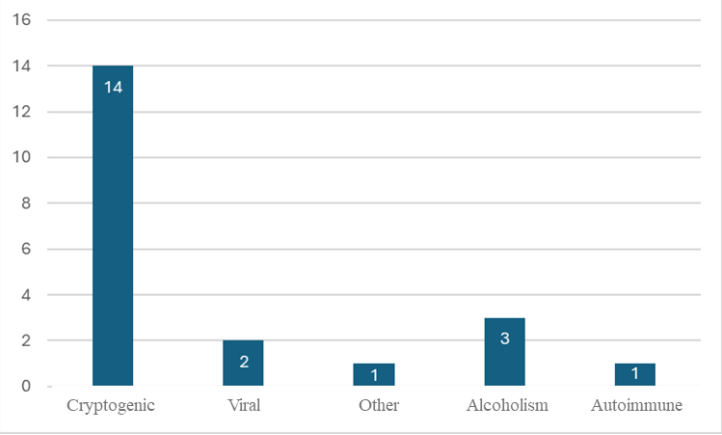
Figure 8. Frequency of the origin of liver failure in women



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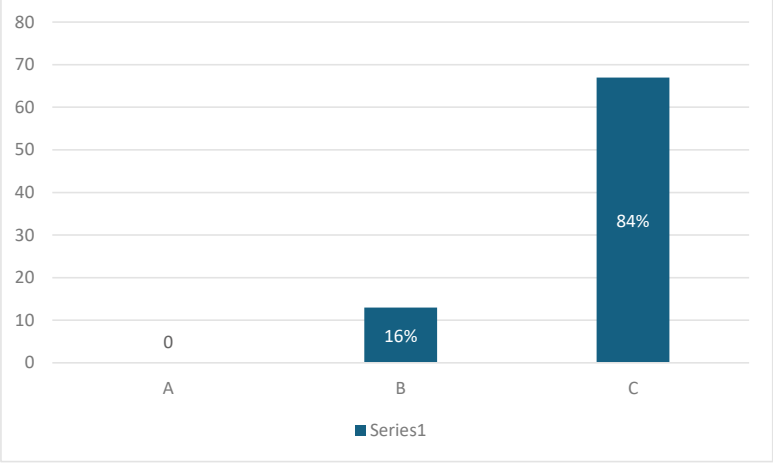
Regarding the Child Pugh scale, it was found that 67 of the patients had a C scale (10 to 15 points), and the remaining 13 were on the B scale (7 to 9 points), while none were in the initial stage on the A scale, as shown in Figure 9.

Figure 9. Percentage of patients and Child Pugh scale



Source: prepared by the author.

In relation to the MELD score in patients and as seen in Figure 10, the average was 30 points, 42.5% of patients were located in the score of 30 to 39 points, 26.20% in the score of 20 to 29 points, 13.75% from 10 to 19 points and also >40 %, finally only 3.75% with score <9.

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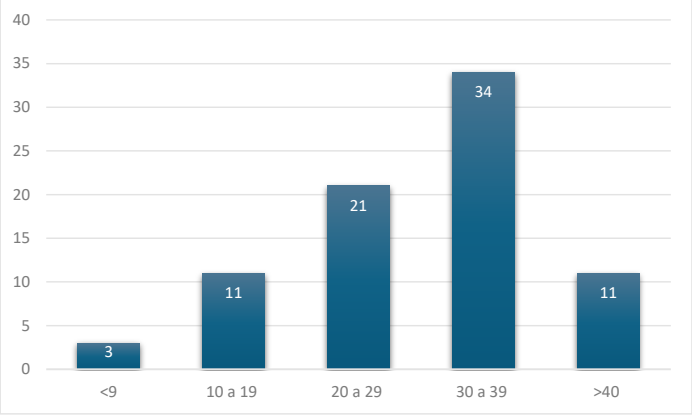
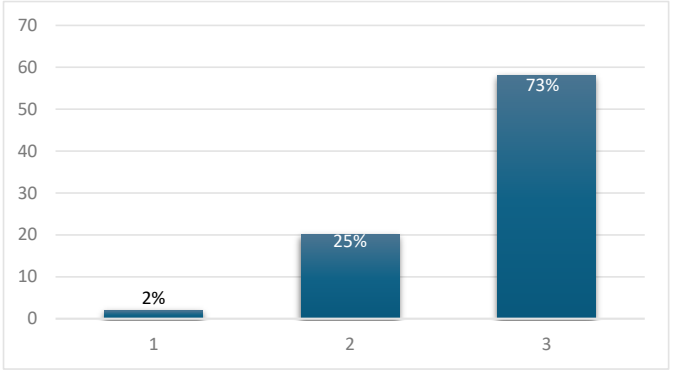
Figure 10. Frequency of the MELD scale



Source: prepared by the author.

Referring to the NECPAL scale, all of them were found with positive scale, i.e. the total population was in need of palliative care, where 58 patients were found with a NECPAL 3, 20 patients with NECPAL 2, and only 2 patients with NECPAL 1, as shown in Figure 11.

Figure 11. Percentage of patients and their NECPAL scale



Source: prepared by the author.

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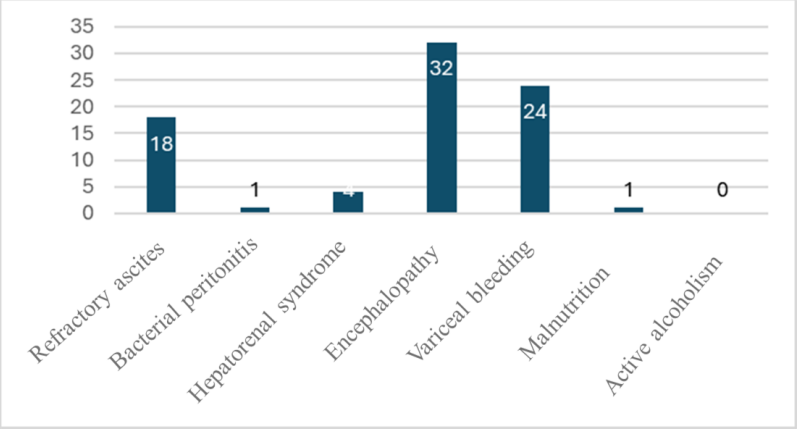
Finally, with respect to the clinical criteria for terminality, it was found that the most frequent clinical data was refractory hepatic encephalopathy with 40%, followed by recurrent esophageal variceal bleeding with 30%, then ascites refractory to treatment with 22.5%, hepatorenal syndrome with 5%, and progressive malnutrition and spontaneous bacterial peritonitis with 1.25%, as shown in Figure 12. In addition, it is worth mentioning that the C classification on the CHILD PUGH scale alone is already considered a clinical criterion for terminality, so 67 patients were already considered terminal by the scale in addition to the clinical picture they presented.

Figure 12. Frequency of clinical criteria for terminality



Source: prepared by the author.

3. Discussion

In the present study, it was observed that the average age of the patients was 56 years, with greater frequency in the age group of 50 to 59 years, which coincides with the study of Jepsen and collaborators, in a Danish population, where the average age was 56 years (18),

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differs from the study of Vaz, Ericsson and collaborators, where the average age of diagnosis was 66 years (19). It also differs from the study by Campollo *et al*, in a hospital in Guadalajara, where the mean age was 44 years for men, but coincides for women where the average age was 56 years (20).

Regarding sex, a higher frequency was found in men, with 73.75%, and 26.5% in women. This coincides with all the studies compared, for example, in the Swedish population study by Vaz and collaborators, a prevalence of 63.5% (19) was found in the male sex. It also coincides with the study conducted by Jepsen and collaborators in the Danish population where the prevalence in men was 66% (28). In Latin populations, there is a study by Bustíos and collaborators in Peru, on epidemiological characteristics in patients with cirrhosis, where the prevalence in men was 54.9% (21).

Subsequently, the presence of comorbidities and the most frequent type were analyzed, where of the total number of patients, 37% (30 patients) had some comorbidity, with the combination of type 2 diabetes and systemic arterial hypertension being the most frequent with 40%, followed by only type 2 diabetes with 36.6%, then arterial hypertension with 16.6% and COPD and HIV infection with 3.3%. These results coincide with the study carried out by Martínez Leyva and collaborators, in a Cuban population, where the main associated comorbidities were diabetes and arterial hypertension with 38 % (22). The results differ from the study carried out in a Swedish population where the main comorbidity in patients with cirrhosis was systemic arterial hypertension, followed by type 2 diabetes (29), also in the study by Jepsen and collaborators in Denmark the main associated comorbidity was type 2 diabetes, followed by different cancers and Chronic Obstructive Pulmonary Disease. In the study carried out in a Peruvian population by Bustíos and collaborators, type 2 diabetes was also highlighted as the main comorbidity followed by chronic renal disease (21).

In relation to the level of schooling of the patients, it was found that 60% had basic schooling, i.e. primary and secondary, however,

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it was not mentioned if the schooling was complete; with 21.2% with high school level, 11.2% had higher education, 7.5% with no schooling, i.e. illiterate, and no patient was found with postgraduate level. These results coincide with the study carried out by Roesch-Dietlen et al. in a Mexican population in the state of Veracruz, where the main level of schooling of patients with liver cirrhosis was basic education (39.1%) (8). It also coincides with the study by Campollo et al. on the epidemiological characteristics of liver cirrhosis in a hospital in Guadalajara, where 40% of 157 patients had basic schooling (20).

Regarding the origin of the hepatic insufficiency of the 80 patients, 73.75% had an alcoholic origin, 17.5% had a cryptogenic origin, the other causes, with a lower percentage, the viral origin with 3.75% and finally with only 2.5% the autoimmune origin and other causes (fatty liver). The relationship between the sex of the patients and the origin of the liver failure was also found as an important result, highlighting that, of 59 men, in 95% of them the origin was alcoholism, while in 19 women, 73.6% of them had more frequent cryptogenic origin. This coincides with the results of Vaz and collaborators, in a Swedish population, where alcohol was the most common etiology with 50.5%, followed by cryptogenic cirrhosis with 14.5%, then viral origin with 13.5% and fatty liver with only 5.7% (19). It also coincides with the study carried out in a Danish population, by Jepsen and collaborators, where the male sex was more related to alcoholism and also with higher mortality rates (18). These results differ slightly from the study conducted in Cuba by Martínez Leyva and collaborators, where the main etiology of liver failure was hepatitis C virus, followed by alcoholism (22).

Regarding the Child Pugh scale, which indicates the prognosis of patients with liver failure, it was found that 67 of them were on the Child Pugh C scale, only 13 patients on the Child Pugh B scale and none were on the A scale, i.e. 84% of the patients had a survival at one year of only 45%, this is important because the prognosis of life of patients is poor, being a strong reason to consider early admission

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to palliative care and planning of advance directives. It coincides with the study carried out in a Peruvian population by Bustíos where most of his 475 patients, 42.5% of the patients were in Child Pugh C stage (21). It also coincides with a Mexican study in the Civil Hospital of Guadalajara, highlighting that in the male population 80% were found in stage C, and the most frequent origin was post ethyl alcoholic (20).

Subsequently, the MELD scale presented by the patients was analyzed, remembering that this scale can estimate mortality at three months, depending on the score at which they are found. It is noteworthy that the average of this study was 30 points, 42.5% of the patients were located in the score of 30 to 39 points, 26.20% in the score of 20 to 29 points, 13.75% from 10 to 19 points and also >40%, finally only 3.75% with a score <9. This means that more than half of our patients, i.e. 45, had an estimated mortality of between 53 and 71% at 3 months, as they were with scores of 30 to 39 and greater than 40, and also consider that the rest of the patients, as they progressed in the disease would have more MELD score and therefore higher mortality. This coincides with a cohort study carried out in Bucaramanga, Colombia, by Zubieta-Rodriguez and collaborators, where the mortality of 81 cirrhotic patients in a third level hospital was studied, concluding that with a MELD score higher than 18 points, mortality increased drastically in contrast to those with lower scores (23). This is worrying, since only 14 patients in the present study had low MELD scores, the rest had poor prognosis from diagnosis and had a late admission to the palliative care program.

Regarding the NECPAL scale, which is an instrument used to identify patients with advanced chronic disease and their palliative need, as well as limited life prognosis, all patients in the present study were found with positive scale, i.e. all had need for palliative care, where 58 patients were found with a NECPAL 3, 20 patients with NECPAL 2, and only 2 patients with NECPAL 1. In other words, 72. Adding the other prognostic parameters such as the Child Pugh

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scale, the MELD scale and also the NECPAL scale, it is clear that the life prognosis of these patients is very limited and they require palliative care to avoid performing procedures that will not be of any benefit to the patient but will have many complications. Although the NECPAL scale was originally validated for oncologic diseases, it has been used for some time to assess palliative needs in advanced non-oncologic diseases, since, as described by Funes Rosas et al. in their study, the NECPAL scale is useful for detecting the population in need of palliative care, and it has a significant predictive capacity for mortality, with an area under the curve of 0. 81, in addition to the fact that it can be used in patients with various comorbidities and provides a more accurate perspective of the life prognosis that these patients may have (24).

The above makes clear the need for the application of this scale in all patients with advanced chronic diseases in a systematized way, as is the case of non-oncologic liver failure, since it has been shown that palliative care in a timely manner ensures compliance with the needs, respect for the dignity of each patient, avoids false expectations, improves quality of life, response to stress and confidence of patients and family, in addition to reducing unnecessary hospitalizations and also reduces hospital costs. If the need for palliative care were routinely assessed in all hospitals in all patients, not only with advanced liver failure, but with any advanced chronic disease, it would be possible to capture more of the population early, and establish a plan of action from the first moment and avoid including patients when they are already in their last days or agony, when it is no longer possible to carry out many palliative care interventions.

Thus, the question arises as to when to initiate palliative support in liver disease, and as Picco and collaborators tell us, it is necessary to consider the clinical indicators already mentioned previously, to consider that the patient has had 2 or more hospitalizations in the last 6 months, that the functional status has decreased, the presence of resistant symptoms and to have dependence in the activities of daily living; in addition, always know the patient's preferences before

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he/she presents symptoms that do not allow him/her to make decisions, respecting his/her principle of autonomy (15).

This could justify the inclusion of a large number of patients in an early palliative care program, because as seen in this study, more than 80% were in advanced stages of the disease and only patients who were admitted to the palliative program were considered, and the number of patients in this institution who had palliative needs and did not receive any palliative care is not known precisely, since one of the criteria for initiating palliative care is that the treating physicians recognize that this need exists, however, there is a great lack of knowledge among physicians in general about palliative care, since in addition to overestimating the prognosis of patients, they consider that palliative care is only for patients in agony and not for all patients with advanced chronic diseases.

Finally, the clinical criteria for terminality in patients were described, it is worth remembering that these criteria are described in the Official Journal of the Federation in the Guide for Comprehensive Management of Palliative Care, which was modified in 2018; it was found in the present study that the most frequent clinical data of terminality was refractory hepatic encephalopathy with 40%, followed by recurrent esophageal variceal bleeding with 30%, then ascites refractory to treatment with 22. 5%, hepatorenal syndrome with 5%, and with 1.25% progressive malnutrition and spontaneous bacterial peritonitis. It is also important to remember that the C classification on the CHILD PUGH scale alone is already considered a clinical criterion for terminality, so 67 patients were already considered terminal by the scale alone, and if the clinical data of each patient are added up, the poor prognosis is clear. These complications observed differ slightly from those recorded in the study by Vaz, Ericsson and collaborators in a Swedish population where the main complications were ascites, esophageal varices and hepatocarcinoma (19), however, it does coincide with that carried out by Campollo and collaborators in Guadalajara, where the main complications and reasons for hospitalization were hepatic encephalopathy, gastrointestinal tract bleeding and ascites, although it is an old study, there

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is not much epidemiological research on the Mexican population (20). It is worth mentioning the difference with a cohort study from the United States where mortality from liver cirrhosis was observed from 1999 to 2016, where the main causes of death were upper gastrointestinal tract bleeding and hepatorenal syndrome (5). All of the above reinforces the need for early referral of this type of patients to palliative care, so that they can receive care focused on symptom management and be able to plan advance directives, always respecting their autonomy and dignity, it will also have an impact on the number of hospital admissions, in avoiding unnecessary procedures and also in decreasing health care costs.

4. Conclusions

According to this study, male sex, ethyl origin of liver failure, an average age of 50 to 59 years, as well as a C classification on the Child Pugh scale and an average of 30 to 39 points on the MELD scale stand out, in addition to the fact that 100% of the patients were found with a positive NECPAL scale, concluding that all patients had palliative needs, as well as advanced chronic disease.

The present study justifies the need to include an early palliative care program in the care of patients with this pathology, since 100% of the patients were found to have palliative needs according to the NECPAL scale, in addition to having poor prognosis scales such as Child Pugh and MELD, emphasizing the need to apply the aforementioned scales in a generalized manner in all patients with liver disease. Also, although it was not an objective of the study, it was found that there is an important relationship between ascites, gastrointestinal tract bleeding and hepatic encephalopathy with worse prognosis in patients, since these were the main clinical manifestations in patients that ended in death, reemphasizing the importance of having a real picture of these patients, which is ultimately bad. In addition, it is important to raise awareness in the medical areas that attend this type of patient, such as emergency, internal medicine and

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intensive care, considering the poor prognosis, and perhaps limiting unnecessary procedures. Likewise, patients and family members should be made aware of the disease and the poor functional and life prognosis and thus avoid unnecessary treatments that result in therapeutic futility.

More studies are needed with a larger number of patients, including patients who have been considered as palliative and non-palliative to verify their poor prognosis and, in due course, to establish therapeutic guidelines for their care, since a limitation of this study is that only patients who were already admitted to palliative care were considered, but the number of patients who were in need of palliative care but who never received care is unknown.

In addition to having an impact on the quality of life of patients and families, protecting their autonomy and dignity at the end of life, inclusion in palliative care will surely result in a decrease in hospital expenses, as well as a lower social, economic and psychological impact on Mexican families.

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