

Effectiveness of the MELD/Na Score and the Child–Pugh Score for the Identification of Palliative Care Needs in Patients with Cirrhosis of the Liver

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Abstract

Objective: Identification of palliative care needs in patients with liver cirrhosis using the MELD/Na score and the Child–Pugh score. **Materials and Methods:** A retrospective study of hospitalized patients with hepatic cirrhosis between January 2015 and December 2016 using the Child–Pugh score and the MELD/Na score in January 2018. **Results:** Recognizing end-of-life patients (the past 12 months of life) is a challenge for health professionals, especially in diseases with poorly defined criteria, such as cirrhosis of the liver. The verification of rapid functional decline and health indicators can be verified using already defined scales such as the Child–Pugh score and the MELD/Na score. Patients were classified according to the Child–Pugh score in Class A (17%), Class B (48.9%), and Class C (34%). The corresponding survival rate was as follows: class A (87.5%), Class B (30.4%), and Class C (31.25%). The MELD/Na score intervals were >9 (2.15%), score 10–19 (46.8%), score 20–29 (27.7%), score 30–40 (19.1%), and score >40 (4.3%). Nearly 51.1% had a MELD/Na score >20 and 48.9% <20. The study revealed that 59.6% of patients died before 12 months. They were end-of-life patients who needed palliative care to reduce the impact of the disease. **Conclusions:** The Child–Pugh score and the MELD/Na score represent a viable and easy-to-use tool to identify patients in need of palliative care, among those with liver cirrhosis. Early identification, timely evaluation, and effective treatment of physical, spiritual, family, and social problems improve the quality of life of people with incurable diseases and their families.

Keywords: Child–Pugh score, cirrhosis of the liver, identification of palliative care needs, MELD/Na score

INTRODUCTION

People are “approaching the end of life” when they are likely to die within the next 12 months. Patients with chronic liver disease have a life-limiting illness that causes multiple distressing symptoms and negatively affects quality of life. This population traditionally does not have an instrument for the identification of palliative care needs the “end of life,” the MELD/Na score, and the Child–Pugh score may be useful in its identification.^[1–3]

Patients with cirrhosis of the liver should be treated with specific treatments for the control of symptoms at the end of their life course because of the strong impact of the disease on the patient and the family. To properly care for these patients, it is necessary to identify and organize an interdisciplinary plan of professionals in palliative care, with the intention of reducing the impact of the disease on patients.^[4,5]

MATERIALS AND METHODS

A retrospective study of hospitalized patients with hepatic cirrhosis between January 2015 and December 2016

Table 1: Interpretation MELD/Na score

Score	Mortality (%)
MELD/Na score >40	71.3
MELD/Na score 30-39	52.6
MELD/Na score 20-29	19.6
MELD/Na score 10-19	6
MELD/Na score <9	1.9

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Table 2: Interpretation Child-Pugh score

Class	Points	Mortality in <1 year	Mortality between 1 and 2 years	Severity of disease
Child Class A	5-6	100	85	Least severe liver disease
Child Class B	7-9	81	57	Moderately severe liver disease
Child Class C	10-15	45	35	Most severe liver disease

Table 3: Patient status at the end of the study

Score	Patients (%)
Living patients	15 (31.9)
Deaths in <90 days	21 (44.7)
Deaths between 91 and 180 days	5 (10.6)
Deaths between 91 and 180 days	2 (4.3)
Deaths after 180 days	4 (8.5)
Total	47 (100.0)

Table 4: Child-Pugh score of study

Class	Mortality in <1 year, patients (%)	Mortality between 1 and 2 years, patients (%)
Child Class A	1 (12.5)	0
Child Class B	15.0 (65.2)	1.0 (4.3)
Child Class C	11 (68.75)	0

Table 5: MELD/Na score of study

Score	Patients (%)	Percentage
MELD/Na score >40	2 (4.3)	51.1
MELD/Na score 30-39	9 (19.1)	
MELD/Na score 20-29	13 (27.7)	
MELD/Na score 10-19	22 (46.8)	48.9
MELD/Na score <9	1 (2.1)	
Total	47 (100.0)	100

using the Child–Pugh score and the MELD/Na score in January 2018.

The MELD/Na score is a scoring system for accessing the severity of chronic liver disease using values as serum bilirubin, serum creatinine, and the international normalized ratio for prothrombin time and sodium, to predict survival [Table 1].

The Child–Pugh score is used to access the prognosis of chronic liver disease, mainly cirrhosis. The score employs five clinical measures of liver disease: total bilirubin, serum albumin, prothrombin time, ascites, and hepatic encephalopathy [Table 2].^[6,7]

RESULTS AND DISCUSSION

During this period, 6493 patients were hospitalized and 47 with liver cirrhosis were included in this study [Table 3].

The median age was 64.3 years; 95.7% were male. The median hospitalization time was 10.7 days. The overall mortality rate was 68.1%.

Patients were classified according to the Child–Pugh score in Class A (17%), Class B (48.9%), and Class C (34%). The

corresponding survival rate was as follows: class A (87.5%), Class B (30.4%), and Class C (31.25%).

The 1-year mortality rate was as follows: class A (12.5%), Class B (65.2%), and Class C (68.75%). The mortality rate after the 1st year was as follows: class A (0%), Class B (4.3%), and Class C (0%). Palliative care needs were identified in Classes B and C [Table 4].

The MELD/Na score intervals were >9 (2.15%), score 10–19 (46.8%), score 20–29 (27.7%), score 30–40 (19.1%), and score >40 (4.3%). Nearly 51.1% had a MELD/Na score >20 and 48.9% <20 [Table 5].

In January 2018, 31.9% were alive. About 44.7% had died in <3 months, 10.6% between 3 and 6 months, and 4.3% after 6 months.

The study revealed that 59.6% of patients died before 12 months. They were end-of-life patients who needed palliative care to reduce the impact of the disease.

According to the Child–Pugh score, in <1 year, the mortality rate of patients in Class B was 65.2% and 68.7% in Class C, and according to the MELD/Na score, patients with a score >20 had 51.1% mortality.

Given these percentages, both classes of patients had criteria to be identified as end-of-life patients requiring special care.

Patients had a decrease in quality of life, clinical, psychological, social, and family changes. Therefore, therapeutic adjustment was necessary to control the worsening of the following symptoms: edema, ascites, fever, fatigue, tiredness, drowsiness, confusion, loss of appetite, pain, dyspnea, and increased bleeding.

CONCLUSIONS

According to the MELD/Na score, in a 3-month period after hospitalization, a number between 19.6% and 71.3% of patients had a mortality likelihood of 51.1%. These numbers of patients were in need of palliative care. The confirmed mortality rate was 44.7%, during these first 3 months.

According to the Child–Pugh score, our Classes B and C patients have a mortality of 65.2% and 68.75% at 1 year, respectively, needing palliative care.

The Child–Pugh score and the MELD/Na score represent a viable and easy-to-use tool to identify patients in need of palliative care, among those with liver cirrhosis.

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Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. Durand F, Valla D. Assessment of prognosis of cirrhosis. *Semin Liver Dis* 2008;28:110-22.
2. Durand F, Valla D. Assessment of the prognosis of cirrhosis: Child-Pugh versus MELD. *J Hepatol* 2005;42 Suppl (1):S100-7.
3. Goldberg E, Chopra S. Cirrhosis in Adults: Etiologies, Clinical Manifestations, and Diagnosis. UpToDate; 2016. Available from: <https://www.uptodate.com/contents/cirrhosis-in-adults-etiological-clinical-manifestations-and-diagnosis>. [Last accessed on 2018 Feb 10].
4. Kim HJ, Lee HW. Important predictor of mortality in patients with end-stage liver disease. *Clin Mol Hepatol* 2013;19:105-15.
5. Ling Q, Xu X, Wei Q, Liu X, Guo H, Zhuang L, *et al.* Downgrading MELD improves the outcomes after liver transplantation in patients with acute-on-chronic hepatitis B liver failure. *PLoS One* 2012;7:e30322.
6. Potosek J, Curry M, Buss M, Chittenden E. Integration of palliative care in end-stage liver disease and liver transplantation. *J Palliat Med* 2014;17:1271-7.
7. Wiesner R, Edwards E, Freeman R, Harper A, Kim R, Kamath P, *et al.* Model for end-stage liver disease (MELD) and allocation of donor livers. *Gastroenterology* 2003;124:91-6.