



Clinical Profile and Short-Term Outcomes of Patients With Decompensated Cirrhosis in a Tertiary-Care Hospital: A Retrospective Observational Study

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Abstract

Background: Decompensated cirrhosis is an advanced manifestation of chronic liver disease associated with complications such as ascites, hepatic encephalopathy and variceal haemorrhage. These complications may require hospitalization and are associated with an increased risk of adverse clinical outcomes. Assessment of clinical presentation, laboratory abnormalities and disease severity can help characterize hospitalized patients.

Aim: To describe the clinical profile and short-term outcomes of patients admitted with decompensated cirrhosis to a tertiary-care hospital.

Materials and Methods: A retrospective observational study was planned using hospital records of 45 patients with decompensated cirrhosis at Government Medical College, Vizianagaram over one year. Data were intended to cover demographic characteristics, underlying aetiology, clinical complications, laboratory parameters, MELD-Na score and in-hospital outcomes. Descriptive statistics were used to summarize available information. Associations between clinical characteristics and hospital outcomes were to be assessed where the completeness of the records permitted.

Results: Among 45 patients, ascites was recorded in 5 (11.1%), hepatic encephalopathy in 3 (6.7%) and variceal bleeding in 10 (22.2%). A count of 12 (26.7%) was supplied for aetiology, but the specific aetiological category was not identified. A figure of 15 (33.3%) was also supplied for laboratory results, although its precise meaning requires clarification. The distribution of MELD-Na scores and the number of patients who died or were discharged alive were not provided.

Conclusion: The available summary identifies several clinical complications among the 45 patients but is insufficient to establish the overall severity profile or in-hospital mortality. Completion of the laboratory, MELD-Na and outcome data is required before definitive conclusions can be drawn.

Keywords: Decompensated cirrhosis; chronic liver disease; ascites; hepatic encephalopathy; variceal bleeding; MELD-Na; hospital outcomes.

INTRODUCTION

Cirrhosis is an advanced stage of chronic liver disease characterized by fibrosis and structural changes that impair normal hepatic function. As the disease progresses, patients may develop complications associated with portal hypertension, impaired hepatic synthesis and disturbances in systemic circulation. The appearance of clinically significant complications marks an important transition from compensated to decompensated disease.

Ascites, hepatic encephalopathy and portal hypertensive gastrointestinal bleeding are major manifestations of decompensated cirrhosis. Other complications, including infection, acute kidney injury, electrolyte disturbances and circulatory dysfunction, may further complicate the clinical course and increase the need for hospitalization [1,2].

The underlying causes of cirrhosis vary between populations and healthcare settings. Alcohol-associated liver disease, chronic viral hepatitis and metabolic dysfunction-associated steatotic liver disease are among the potential aetiologies. Establishing the underlying cause is important for appropriate clinical management and for describing the characteristics of the population receiving hospital care.

Clinical examination and laboratory investigations are important components of the assessment of disease severity. Bilirubin, serum albumin, international normalized ratio (INR), creatinine and serum sodium provide information about hepatic dysfunction, renal impairment and other systemic abnormalities. These measurements contribute to commonly used prognostic tools, including the Child–Turcotte–Pugh (CTP) classification and the Model for End-Stage Liver Disease incorporating sodium (MELD-Na) score [3].

Prognostic scoring systems can support risk stratification, but their interpretation depends on accurate laboratory measurements, consistent timing of assessment and the clinical characteristics of the study population. A study conducted in northern India evaluated the CTP, MELD and MELD-Na scores in relation to short-term mortality among patients with end-stage liver disease, highlighting the relevance of severity assessment in this setting [3].

Retrospective hospital-based studies can provide useful information about the complications encountered in clinical practice and the immediate outcomes of hospitalized patients. The present study was planned to describe the clinical profile and short-term outcomes of patients with decompensated cirrhosis admitted to a tertiary-care hospital over a one-year period.

AIM AND OBJECTIVES

Aim

To evaluate the clinical profile and short-term in-hospital outcomes of patients with decompensated cirrhosis at a tertiary-care hospital.

Objectives

1. To describe the underlying aetiology of cirrhosis among the included patients.
2. To assess the frequency of ascites, hepatic encephalopathy and variceal bleeding.
3. To summarize available laboratory parameters and MELD-Na scores.
4. To document in-hospital outcomes, including discharge and mortality.
5. To explore associations between clinical characteristics, disease severity and in-hospital outcomes where sufficient data are available.

MATERIALS AND METHODS

Study design

This was designed as a retrospective observational study based on medical records of patients admitted with decompensated cirrhosis.

Study setting and duration

The study was conducted in the Department of General Medicine at Government Medical College, Vizianagaram, a tertiary-care hospital.

The study covered one year, from Jan 2020 to Dec 2020

Study population and sample size

The study included 45 patients with a documented diagnosis of decompensated cirrhosis during the specified study period. The source of records and the patient-selection procedure should be specified from the actual study protocol.

Eligibility criteria

The intended study population comprised adult patients with documented cirrhosis and a clinical manifestation of hepatic decompensation during the index admission.

The precise inclusion and exclusion criteria should be confirmed from the approved protocol. Patients with insufficient documentation to establish the diagnosis or determine eligibility should be handled according to the prespecified study criteria. Missing information for an individual laboratory parameter should not automatically result in exclusion from all other analyses.

Data collection

Relevant information was intended to be extracted from hospital records using a structured data collection form. The variables included demographic information, the documented aetiology of cirrhosis, clinical complications, laboratory findings, disease severity scores and hospital disposition.

Clinical complications of interest included ascites, hepatic encephalopathy and variceal bleeding. Laboratory variables potentially relevant to severity assessment included bilirubin, albumin, INR, creatinine and serum sodium. These variables should be reported only where corresponding results are available in the medical records.

MELD-Na assessment

The MELD-Na score was intended to assess the severity of liver disease using a validated calculation method and laboratory values obtained at a defined point during admission.

The calculation method, timing of laboratory measurements and number of patients with complete score components must be specified in the final manuscript. Scores should not be estimated when required laboratory values are missing.

Outcome assessment

The primary outcome was defined as in-hospital mortality. Secondary outcomes included discharge alive, major complications and length of hospital stay, where documented.

The number of patients who died, were discharged alive or had another documented disposition should be obtained from the hospital records before the outcome analysis is completed.

Statistical analysis

Categorical variables should be summarized as frequencies and percentages. Continuous variables should be reported as means with standard deviations or medians with interquartile ranges, depending on their distribution.

Where adequate data are available, clinical characteristics may be compared between survivors and non-survivors using appropriate statistical tests. Analysis of MELD-Na in relation to mortality should include effect estimates and confidence intervals where feasible. Multivariable analysis should only be undertaken if the number of outcome events supports a sufficiently stable model.

The statistical software and version, methods for handling missing information and significance threshold should be added from the actual analysis plan. The reporting structure should follow the relevant STROBE recommendations for observational studies [4].

Ethical considerations

Ethical approval details should be provided from the institutional documentation, including the ethics committee name, approval number and date, where applicable. Any waiver of informed consent for retrospective record review should be described according to the committee's decision. Patient confidentiality must be maintained throughout data extraction and reporting.

RESULTS

Study population

A total of 45 patients were included in the study summary. The age distribution, sex distribution and other baseline demographic characteristics were not provided in the available data.

Clinical complications

Ascites was recorded in 5 patients (11.1%), hepatic encephalopathy in 3 patients (6.7%) and variceal bleeding in 10 patients (22.2%).

Table 1. Distribution of reported clinical complications among patients with decompensated cirrhosis (N = 45)

Clinical characteristic	Number (n)	Percentage (%)
Ascites	5	11.1
Hepatic encephalopathy	3	6.7
Variceal bleeding	10	22.2
Total study population	45	100.0

Note: The categories may overlap if individual patients experienced more than one complication. Percentages use 45 as the denominator and must be checked against the original medical records.

Aetiological profile

A count of 12 patients was supplied for aetiology. However, the specific cause of cirrhosis represented by this count was not identified in the available information.

Table 2. Aetiological data available for analysis

Variable	Number (n)	Percentage (%)
Aetiological category not specified in the supplied summary	12	26.7
Total study population	45	100.0

The first row cannot be interpreted as a specific clinical aetiology until the corresponding diagnosis is identified. Other causes of cirrhosis were not quantified in the supplied data.

Association between severity and outcome

A comparison of MELD-Na scores between survivors and non-survivors could not be performed because the score values and in-hospital outcome classifications were unavailable. No conclusion regarding the prognostic value of MELD-Na can be drawn from the current summary.

DISCUSSION

Summary of the available findings

The supplied data describe 45 patients with decompensated cirrhosis and identify ascites, hepatic encephalopathy and variceal bleeding among the recorded clinical complications. Variceal bleeding was documented in 10 patients, ascites in five and hepatic encephalopathy in three.

These counts provide a preliminary description of selected manifestations but do not establish the overall clinical profile of the cohort. The reason is that the supplied counts do not cover all possible complications and may overlap within individual patients. The data therefore require reconciliation with the source medical records before a comprehensive interpretation can be made.

Clinical presentation of decompensated cirrhosis

Ascites, hepatic encephalopathy and portal hypertensive gastrointestinal bleeding are important manifestations of decompensated cirrhosis [1,2]. The relative frequency of each complication can vary among hospitals according to referral patterns, disease severity, access to outpatient management and the definition used for inclusion.

The current counts should be compared with other hospital-based studies only after confirming that each complication was recorded consistently and that the same denominator was used. The observed number of cases alone does not establish the severity of each complication or its contribution to mortality.

Aetiology and laboratory evaluation

Identifying the underlying cause of cirrhosis is important for characterizing the study population and understanding the clinical context of admission. However, the available count of 12 was not linked to a named aetiological category. A valid comparison with other studies cannot be undertaken until the category is clarified.

Laboratory evaluation is also essential to interpret hepatic synthetic function, renal involvement and electrolyte disturbances. Since the actual values were not provided, no biochemical pattern can be established in this cohort. The reported count of 15 related to laboratory results requires a clear definition before it can be interpreted.

MELD-Na and short-term outcomes

The MELD-Na score may be useful for evaluating the severity of liver disease when the required laboratory components are available. An Indian study by Acharya and colleagues compared CTP, MELD and MELD-Na in patients with end-stage liver disease and examined their relationship with short-term mortality [3]. This provides relevant clinical context for including severity assessment in the present study.

Nevertheless, the current data do not contain patient-level MELD-Na values or mortality outcomes. It is therefore not possible to determine whether higher scores were associated with adverse outcomes in this cohort. Any claim that MELD-Na predicted mortality would require a verified analysis with the actual scores and outcome classifications.

Clinical implications

A retrospective review of patients with decompensated cirrhosis can help summarize the burden of complications and identify gaps in clinical documentation. A complete analysis could contribute to local audit of laboratory assessment, severity scoring and hospital disposition.

At present, the findings should be considered preliminary. The number of complications recorded does not establish whether they were the principal reason for admission, whether patients had multiple complications, or whether the complications were associated with death.

Strengths and Limitations

The study has the potential to describe a defined cohort of 45 hospitalized patients over one year. Its focus on clinical complications, laboratory parameters, MELD-Na and hospital outcomes provides a relevant structure for assessing the immediate clinical burden of decompensated cirrhosis.

However, the current dataset summary is incomplete. The specific aetiological category, meaning of the laboratory-related count, MELD-Na values and in-hospital outcome counts are not available. The demographic profile and other possible complications were also not supplied. These gaps prevent a comprehensive analysis and limit the conclusions that can be drawn.

As a retrospective, single-centre study, the final work may also be affected by incomplete medical records, referral bias and limited generalizability. The results should therefore be interpreted in line with the actual dataset and its limitations.

CONCLUSION

The available data describe 45 patients with decompensated cirrhosis and record ascites in five patients, hepatic encephalopathy in three and variceal bleeding in ten. The aetiological category associated with the count of 12 remains unspecified, and the laboratory-related figure of 15 requires clarification.

A complete assessment of short-term outcomes will require verified laboratory measurements, calculated MELD-Na scores and the number of patients discharged alive or dying during hospitalization. Until these data are available,

conclusions regarding mortality, predictors of poor outcome and prognostic performance cannot be established.

Recommendations

1. Verify the specific causes of cirrhosis recorded in the source medical records.
2. Clarify what the laboratory-related count of 15 represents and provide actual laboratory values where available.
3. Calculate MELD-Na only from verified laboratory components collected at the defined admission time.
4. Record discharge status and in-hospital mortality for all included patients.
5. Report missing data explicitly and avoid drawing prognostic conclusions without appropriate analysis.

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