Table 4: The area under the receiver operating characteristic (AUROC) for prognostic scores for short- and long-term mortality in patients with AH.

Prognostic score	30-day mortality		90-day mortality		6-month mortality		1-year mortality	
	AUROC	95% CI	AUROC	95% CI	AUROC	95% CI	AUROC	95% CI
CP	0.53	0.25–0.8	0.47	0.21–0.73	0.55	0.35–0.76	0.5	0.31–0.69
mDF	0.79	0.64–0.94	0.81	0.67–0.95	0.72	0.54–0.91	0.63	0.43–0.82
GAHS	0.78	0.54–1	0.81	0.61–1	0.73	0.54–0.92	0.64	0.44–0.84
ABIC score	0.74	0.46–1	0.79	0.55–1	0.67	0.44–0.91	0.66	0.45–0.87
MELD	0.84	0.71–0.96	0.85	0.74–0.97	0.74	0.56–0.92	0.64	0.44–0.83

Follow-up data for one patient was not available as the patient's care was transferred to another hospital. The cumulative 30-day and 90-day mortality in this subgroup was 11.6% (5/43) and 14.0% (6/43). The long-term survival data was unavailable for another patient whose followup was lost. The respective 6-month and 1-year cumulative mortality in this cohort was 21.4% (9/42) and 26.2% (11/42).

In predicting the short-term (30 and 90 day) prognosis in this cohort of patients, GAHS, Maddrey's DF, MELD, and ABIC scores all have a similar accuracy as demonstrated by their AUROC. However, they are uniformly poor in predicting survival beyond 6 months with AUROC not exceeding 0.74. Childs-Pugh score has been shown to be a very poor predictor of survival in both short and long term (Table 4). Clinically significant portal hypertension (HVPG $\geq$ 10 mmgHg) is neither associated with short-term nor long-term prognosis (P = nonsignificant).

Abstinence from alcohol in 3 to 6 months from the diagnosis of AH was significantly associated with survival at the end of the year ($P < 0.05$) and predicted survival with an AUROC of 0.83 (95 CI: 0.71–0.95).

4. Discussion and Conclusion

Despite decades of debate and controversy, the role of histology in identifying the specific cohort described in these studies is still not unequivocally established. In a study that analysed 41 patients biopsied within a month of first presentation with decompensated alcoholic liver disease, none of the histological features were predictive of survival by Cox multivariate analysis [17]. In contrast, a recent study showed that the positive likelihood ratio of the presence of SIRS and clinical features in diagnosing AH is only 1.2, while histological criteria had the best area under the curve in the prediction of adverse outcome [18]. In addition to the lack of consensus, patients with AH have low platelet count and coagulopathy necessitating transjugular approach for the liver biopsy. As transjugular liver biopsy is available in limited number of centres, algorithms and scores using clinical and simple laboratory parameters are widely used in the clinical management of these patients.

We have described a comparison of 5 different prognostic scores in their value of predicting short- and long-term survival in patients with AH. All the scores with the exception of the CP score have a reasonable accuracy in predicting 30- and 90-day mortality. CP score was originally described to assess the operative risk is patients with established cirrhosis and was developed to predict their survival [19]. The relative ease by which it can be calculated at the bedside has meant that it has remained popular among clinicians. However, its use is limited in predicting prognosis in patients with "acute on chronic liver failure," in particular those with alcoholic hepatitis.

As with CP score, MELD is not a system developed specifically to evaluate AH. MELD score was described initially to predict survival following elective transjugular intrahepatic portosystemic shunts (TIPSS) for the prevention of variceal rebleeding or for the treatment of refractory ascites [20]. Utility of MELD score has since extended to assess the mortality risk in patients with end-stage liver disease and to aid organ allocation priorities in transplant centres [11]. Strength of MELD score is that it functions as a continuous variable and hence the clinical outcome can be accurately estimated based on a particular individual's MELD score. In our cohort, MELD performs well in predicting short-term outcome in AH. However, estimation of MELD score requires the use of a calculator and there is no consensus on the optimal cut-off value for this score as different studies have chosen different tradeoffs in setting the test threshold (sensitivity and specificity) [21–24].

Value of Maddrey's DF has been verified by more than 30 years experience [10]. Its main use has been in determining the group of patients with AH that might benefit from corticosteroid therapy. However, Maddrey's DF has often been used to assess the severity of biopsy proven AH and this has not yet been accepted as a standard practice. The GAH score depends entirely on simple clinical and laboratory parameters and has been shown to have a higher overall accuracy compared to the MELD and Maddrey's DF in predicting in-hospital death [12]. It also stratifies the group of patients with a high Maddrey's DF who will recover without being treated with steroids. The ABIC score was developed in an attempt to risk stratify the death in patients with AH at 90 days and 1 year [13]. It stratifies patients into high-, moderate-, and low-risk groups. In our study, the performance characteristics of both GAH and ABIC scores were comparable to that of Maddrey's DF. However, the GAH and ABIC scores have not been verified in countries out of which they were derived in.

The influence of portal pressure in the setting of alcoholic hepatitis is not well established. Rincon et al. attempted