Intensive Therapy Unit Escalation and Renal Replacement Therapy in Decompensated Liver Disease - Utility or Futility

A. Zahid 1, M. Choudhury 1, B. Eross 1, E. Williams 1, N. White 2, S. Al-Shamma 1
1Gastroenterology, 2Intensive Care, The Royal Bournemouth Hospital, Bournemouth, United Kingdom

Introduction

Alcohol is the leading cause of mortality in UK for liver related problems. 1 A recent NCEPOD report highlighted deficiencies in the acute care received by patients with decompensated Alcoholic Liver Disease (ALD), including early management and access to specialist review and ITU care. 1

At Royal Bournemouth Hospital (RBH), we looked to assess local outcomes and predictors of survival for patients admitted to our ITU who had decompensated Chronic Liver Disease (CLD). Specifically we wanted to analyse the utility of mechanical ventilation (MV) and renal replacement therapy (RRT).

Methods

We interrogated a prospective ITU admissions database and identified 64 patients with decompensated CLD of any aetiology admitted between 2008 and 2013. Case note analysis was performed on each set of notes, collecting data on demographics, aetiology of the CLD, decompensation cause, Child’s and MELD scores, presence of Acute Kidney Injury (AKI), interventions received and to see if the patient survived to hospital discharge, 30-day and 1-year mortality. We separated the data into those with ALD and those with non-ALD causes. Data was compared to outcomes from a previous study on CLD patients admitted to ITU at RBH which was conducted between 2003-07.

Results

- 42/64 (66%) of all patients were males.
- 55/64 (86%) had ALD.
- Mean age was 47.7 years for ALD cohort, 50.8 years for non-ALD cohort.
- The most common precipitant was Upper Gastrointestinal bleed followed by Sepsis and Alcoholic Hepatitis in the ALD group.
- AKI was present in 32 patients (50%; 55% ALD vs. 22% non-ALD; p <0.05.) (See graph 1)

Graph 1. Percentage presence of AKI in ALD vs. non-ALD cohort

- In the ALD cohort, 80% were in Child C and mean MELD score was high(27)
- 29/55 (53%) patients with ALD had prior contact with hepatology services vs. 7/9 (79%) for non-ALD.
- 28/66 patients (44%) received MV.
- 10/28 who had MV also received RRT. All of those on RRT were from the ALD cohort.
- 30-day mortality was 58% for ALD and 66% for non-ALD with 1-year mortalities of 71% and 77% respectively.
- Overall, survival to hospital discharge was 20/64 (31%).
- 1 year survival improved from the previous study

Conclusions

1. Outcomes for patients with decompensated CLD including ALD are improving and ITU escalation should be offered early to all appropriate patients.
2. Improved survival has been demonstrated in those patients escalated within 48 hours and for those previously known to hepatology services.
3. MV or RRT should be considered as they are not always predictive of poor outcome.

References