Predicting mortality of patients with cirrhosis admitted to medical intensive care unit: Experience of a single tertiary center in Qatar

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ABSTRACT

Background/aims: Prognosis for patients with cirrhosis admitted to medical intensive care unit (MICU) is poor. The objective of this study was to assess the predictors for hospital mortality and admission of cirrhotic patients to MICU in Qatar.

Materials and methods: We conducted a retrospective cohort study of consecutive adult cirrhotic medical-ICU patients whom hospitalized from 2007 through 2012 to Hamad General Hospital-Qatar. We compared them to cirrhotic patients who admitted to medical wards during same period of time. All data were recorded and analyzed with respect to demographic parameters, clinical features and laboratory as well as radiology characteristics on day one of admission to MICU. Cirrhosis diagnosis was established either with a liver biopsy or the combination of physical, laboratory and radiologic findings. Predictors of mortality were defined by logistic regression analysis.

Results: The cohort comprised 109 cirrhotic MICU patients, 86.2% were males and their mean age ± SD = 51.6 ± 11.5. MICU-cirrhotic had longer hospital length of stay (LoS) than medical wards-cirrhotic (both for survivors and non-survivors). Mortality was higher for the MICU-cirrhotic group than medical wards group (27 (24.8%) deaths vs. 12 (5.3%) deaths, respectively, p = 0.001). In multivariate logistic regression analyses, older age > 60 years (p = 0.04), APATCH-II score (p = 0.001) and MELD score (p = 0.02) were independent predicting factors for overall mortality. Furthermore, admission with severe hepatic encephalopathy, upper gastrointestinal bleeding and SOFA score were independent predicting factors for MICU admission.

Conclusion: Severe hepatic encephalopathy, upper gastrointestinal bleeding and SOFA score predict MICU admission of cirrhotic patients. Among MICU cirrhotic patients, older age, APATCH-II score and MELD score predict mortality.