

Category : **Respiratory: ARDS**

A181 - Time dependent covariate analysis of liver parameters for vv ecmo survival

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Introduction:

Extracorporeal membrane oxygenation (ECMO) provides a rescue strategy in treatment of acute respiratory distress syndrome (ARDS). However, its use can be associated with serious complications and hepatic dysfunction is a commonly observed phenomenon. Due to several limitations of studies addressing liver dysfunction results are conflicting and to date there is no conclusive evidence of impact of altered liver dysfunction in prognostication of VV ECMO support survival. This is further limited by a lack of data regarding sequential alterations of liver parameters during ECMO support (1).

We aimed for detection in trends of liver dysfunction as a prognostic value to predict survival of VV ECMO support in a large cohort.

Methods:

Retrospective, monocentric evaluation of VV ECMO patients from the years 2013-2021. Liver dysfunction was assessed by sequential measurements of bilirubin and liver enzymes (ASAT, ALAT).

Patients were evaluated in regard to mortality, disease severity (SOFA-Score on ICU admission, duration of ECMO support, ICU/hospital length of stay). The study has been approved by the local ethics committee (#492/20). All values are mean±standard deviation(SD) or median±interquartile range (IQR). Univariate time dependent Cox proportional hazard (CoxPH) analyses were performed using R.

Results:

366 (262 male) patients underwent VV ECMO for ARDS. Grouped (by in-hospital survival status, survivors vs. non-survivors) stats: age 51±12 vs. 56±12 years (p<0.001), weight 102±33 vs. 94±32 kgs (p=0.02), height 175±10 vs. 174±9 cm. Median ECMO-support was 13±9 vs. 16.7±27 days (no differences between groups), SOFA Score on ICU admission was 8±2. vs 9±3 (p=0.005). Hazard ratios for liver parameters are depicted in the Figure.

Conclusion:

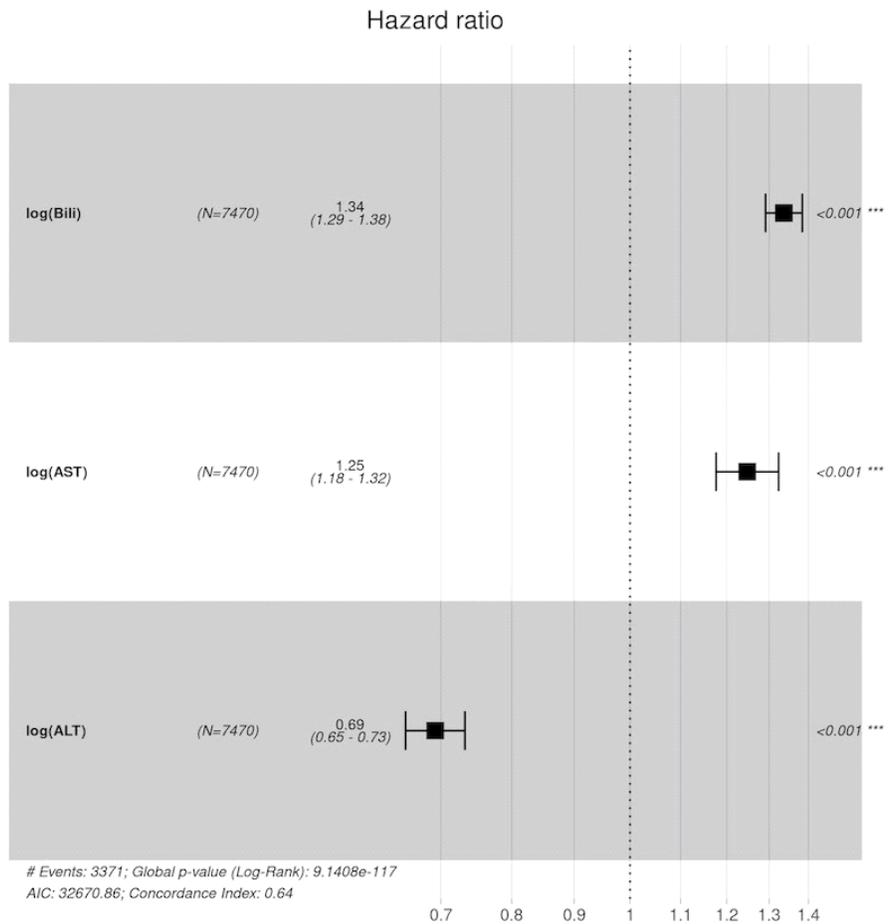
Timedependent CoxPH analysis revealed Bilirubin and ASAT as independent independently increase the risk of death on VV ECMO support.

References:

1. Lazzeri C et al. J Artif Organs (2018) 21:61–67

Image :

Hazard ratio



Hazard Ratios of liver parameters. Bilirubin and ASAT independently increase risk of death on VV ECMO