

### 231 In-hospital outcomes following an acute coronary syndrome in patients with liver fibrosis: results from the real-world observational registry of acute coronary syndromes (REALE-ACS)

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**Aims:** The prognostic role of liver fibrosis (LF) in acute coronary syndrome (ACS) patients is unclear. Biochemical markers and scoring systems, such as the APRI score and the FIB-4 score, have recently been shown to be reliable in predicting LF. We aimed to investigate the relationship between LF and in-hospital outcomes in consecutive ACS patients.

**Methods and results:** The REALE-ACS is a real-world monocentric observational study to investigate characteristics, management and outcomes of patients admitted for ACS from January 2016 to January 2020. LF was defined by an APRI score  $>0.70$  and FIB-4 score  $>3.25$ . We investigated the association of APRI and FIB-4 with in-hospital adverse events (AEs) defined as cardiogenic shock and death. 469 consecutive ACS patients were included. Mean age was  $65.7 \pm 13.0$  years and 108 (23%) were women. Overall, 7.9% of patients had LF. STEMI was more common in LF patients (86.5% vs. 40.8%,  $P < 0.001$ ). Patients with LF had lower hypertension (64.9% vs. 81.7%,  $P = 0.015$ ), and higher GRACE score upon admission ( $155.3 \pm 48.4$  vs.  $131.6 \pm 38.9$ ,  $P = 0.001$ ). Higher serum levels of aspartate aminotransferase [242 (184.5-363) vs. 22 (17-34),  $P < 0.001$ ], alanine aminotransferase [67 (51.5-115) vs. 20 (15-29),  $P < 0.001$ ], white blood cells [12 000 (10 145-14 350) vs. 8935 (7262.5-11 267),  $P < 0.001$ ], percentage of neutrophils ( $97.3 \pm 104.5$  vs.  $68.5 \pm 13.7$ ,  $P < 0.001$ ), D-dimer [1039 (435.5-2100) vs. 436 (275-894),  $P < 0.001$ ], and lower percentage of lymphocytes ( $12.3 \pm 6.0$  vs.  $21.7 \pm 11.21$ ,  $P < 0.001$ ) were reported in LF patients. Globally, 49 AEs were recorded. At stepwise multivariable logistic regression analysis including clinical and biochemical factors, COPD [odds ratio (OR): 2.47, 95% confidence interval (CI): 1.15-5.29,  $P = 0.020$ ], HS-troponin levels (OR: 2.05, 95% CI: 1.02-4.10,  $P = 0.043$ ), and APRI  $> 0.70$  (OR: 2.58, 95% CI: 1.07-6.22,  $P = 0.035$ ) were associated with AEs.

**Conclusions:** ACS patients with LF have a high STEMI rate and are at higher risk of worse in-hospital AEs. Our findings suggest that LF may contribute to the identify ACS patients at high-risk for adverse events and mortality.