Abstract: **P166**

**Serum albumin prognostic value in patients with acute coronary syndrome with ST-segment elevation**

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Introduction: Albumin is an anti-oxidant protein with several vascular effects and its synthesis decreases in pro-inflammatory states, which may play an important role in cardiovascular diseases.

Purpose: The aim of this study was to evaluate the prognostic impact of serum albumin in patients with Acute Coronary Syndrome with ST-segment elevation (ACS-STe).

Methods: This was a retrospective study of consecutive patients diagnosed with non-fatal ACS-STe and submitted to primary percutaneous coronary intervention (PCI) between January 2011 and November 2016, who were assessed for serum albumin, in g/dL, at hospital admission. Hypoalbuminemia was defined as serum albumin <3.4g/dL. At a median follow-up of 24 months (IQR 14-42), the primary outcomes were overall death (cardiovascular and non-cardiovascular) and MACE (re-infarction, coronary revascularization, decompensated heart failure and death).

Results: Of a total of 429 patients, with a mean age of 65.1±13.4 years, 72.7% were men, with an average serum albumin of 3.87±0.45g/dL.

We identified 48 patients with hypoalbuminemia, half of them male. These individuals were older (71.4±11.2 vs 64.3±13.4 years old, p<0.001), had previous history of arterial hypertension more frequently (72.9% vs 57.5%, p<0.05) and, at admission, higher median values of C-reactive protein (0.7, IQR 0.3-2.9 vs 0.3, IQR 0.19-0.7, p<0.001) and TIMI score (6, IQR 4-7.8 vs 3, IQR 2-5, p<0.001). Although no significant differences were found in left ventricular systolic function (46.2±11% vs 47.7±9.8%, p=0.308), these patients reached higher Killip-Kimball (KK) classes (KK IV: 14.6% vs 5.5%, p<0.05) and had right ventricular systolic dysfunction more frequently (27.9% vs 13.9%, p<0.05).

In the group of patients with hypoalbuminemia, the ROC curve analysis showed an area under the curve for overall death of 0.726 (95% CI 0.65-0.88) and 0.518 (CI 95% 0.453-0.583) for MACE.

When adjusted for age, previous history of arterial hypertension, left and right ventricular systolic function and maximum KK class reached, hypoalbuminemia was able to significantly predict mortality (HR: 2.48, 95% CI 1.1-5.6) but not MACE (HR: 0.63, 95% CI 0.3-1.2).

Conclusions: Although associated with a greater number of comorbidities, hypoalbuminemia seems to be an independent factor of worse prognosis in subjects with ACS-STe undergoing primary PCI. Thus, serum albumin may be an additional parameter to be taken into account in the risk stratification of these patients.