

## **PO 18**

### **Predictors of Acute Coronary Syndromes in young patients**

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**Background:** Acute coronary syndromes (ACS) are frequent in adult patients, yet its prevalence is lower in young patients. The analysis of clinical predictors of coronary events in young patients can help to establish a better prevention strategy.

**Objective:** Evaluate the clinical predictors of ACS in young patients.

**Methods:** Multicenter retrospective study, based on the Portuguese Registry of ACS between 1/10/2010-8/01/2019. Patients were divided in two groups: A – age inferior to 35 years old, and B - age between 35 and 45 years old. Were excluded patients without a previous cardiovascular history or clinical data on the admission, and with angina diagnostic. Logistic regression was performed to assess predictors of ACS in young patients.

**Results:** 1266 patients were included, 115 in group A (9.1%) and 1151 in group B (90.9%). Both groups were similar regarding gender, body mass index, first medical contact, diabetes, smoking status, familiar history of cardiovascular disease, previous ACS, symptoms, Killip classification and admission blood samples. Group A had lower prevalence of arterial hypertension (14 vs 34.7%,  $p<0.001$ ) and dyslipidemia (25.9 vs 47.5%,  $p<0.001$ ), presented more ST-segment elevation myocardial infarction (STEMI) at admission (68.7 vs 57.1%,  $p=0.016$ ) with a culprit lesion on the left anterior descending artery (67 vs 44.9%,  $p<0.001$ ). On the other hand, Group B had more non-STEMI (42.9 vs 31.3%,  $p=0.016$ ), more multivessel coronary disease (34.3 vs 16.3%,  $p<0.001$ ), and a culprit lesion in STEMI patients was the



right coronary artery (29 vs 18.1%,  $p=0.024$ ). Blood work reveals higher values of low-density lipoprotein (53.5 vs 23.9%,  $p<0.001$ ) and triglycerides (29.9 vs 49.7%,  $p<0.001$ ) on the group B. Curiously, the group A had more prevalence of midrange left ventricular ejection fraction (LVEF), with both groups with similar preserved LVEF. Logistic regression revealed arterial hypertension (odds ratio (OR) 2.61,  $p=0.002$ , confidence interval (CI) 1.44-4.73) and dyslipidemia (OR 2.27,  $p=0.001$ , CI 1.39-3.71) as predictors of ACS in young patients.

**Conclusions:** Arterial hypertension and dyslipidemia were clinical predictors of ACS in young patients.