Abstract: **P829**

**Prognostic impact of coronary no-reflow phenomenon after primary percutaneous coronary intervention in patients with ST elevation myocardial infarction**

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Introduction: Coronary no-reflow phenomenon is a condition in which normal blood flow is not restored after relief of vessel obstruction. It can occur in up to 10% of cases of primary percutaneous coronary intervention (PCI).

Purpose: To determine the incidence and prognostic value of no-reflow phenomenon after primary PCI in patients (pts) with STEMI.

Methods: Single-center study that included the pts with STEMI who underwent primary PCI for myocardial reperfusion during 2017. STEMI was defined by the European Society of Cardiology criteria. Diagnosis of no-reflow was made by angiographic criteria. According to TIMI (Thrombolysis in Myocardial Infarction) grading after PCI, the pts were divided into no-reflow group (TIMI grade = 2 after successful lesion dilation without mechanical complications such as dissection, spasm or obvious distal embolization) and normal reflow group (TIMI grade 3). In-hospital outcomes included complications and death occurrence after STEMI. After-discharge outcome was a composite of all-cause mortality and unplanned hospitalization due to heart failure (HF) or acute coronary syndrome.

Results: A total of 104 pts were included: 75 (72.1%) male, mean age of 62.8 ± 14.4 years. No-reflow was diagnosed in 8 pts (7.7%). Inferior STEMI was the most diagnosed [43 pts (41.3%), 9 of which with right ventricular involvement)] followed by anterior STEMI [32 pts (30.8%)]. The majority of pts were revascularized in the first 6 hours of symptoms onset [62 pts (59.6%)]. All but one was submitted to coronary stenting. There was no statistically difference between groups in terms of baseline characteristics, coronarography findings and maximal cardiac troponin T level, except for the Ilb/IIa glycoprotein inhibitors administration that was higher in the no-reflow group (62.5% vs 8.3 %, p < 0.01). During hospital stay, 25 pts (24.0%) develop HF [16 with Killip-Kimball (KK) class evolution = 3], 22 (21.2%) presented arrhythmic complications (5 suffer aborted cardiac sudden death due to ventricular fibrillation) and only 1 (0.93%) progressed with mechanical complication (free wall rupture that occurred in a no-reflow patient). In-hospital mortality rate was 3.8%. No-reflow phenomenon was significantly associated with KK class evolution = 3 (p = 0.02), moderate left ventricular dysfunction at discharge (p < 0.01), higher in-hospital mortality (p = 0.03) and longer hospital length of stay (p = 0.02). After-discharge outcome was observed in 6 pts with no difference between groups.

Conclusions: No-reflow phenomenon during primary PCI in pts with STEMI was uncommon but associated with poorer in-hospital outcomes and longer hospital stay. Despite its early adverse prognostic impact, no-reflow was not related to worse cardiovascular prognosis after discharge. Thus, prompt recognition of pts at high risk of no-reflow may provide the opportunity to develop preventative strategies and to improve short-term outcomes.