Abstract: **P3128**

**Unprotected left main revascularization in patients with acute myocardial infarction: insights of a multicenter national registry**

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Introduction: Unlike stable coronary disease, there is no consensus about the best revascularization strategy for unprotected left main coronary artery (ULMCA) disease associated with acute myocardial infarction (MI). Recent studies have shown that percutaneous coronary intervention (PCI) is technically feasible with acceptable outcomes, making it a reasonable alternative to surgical revascularization (CABG).

Aims: To describe the practice of ULMCA revascularization in MI patients (pts) and its evolution over an 9-year period. To analyze the prognosis of this population and determine the effect of revascularization on outcome.

Methods: Retrospective, multicenter national observational study that included 19 430 MI pts from October 2010 to December 2018. Pts who presented ULMCA as culprit lesion were selected and then compared the subgroup that underwent revascularization by PCI alone versus (vs.) CABG alone. Primary endpoint (PE) was a composite of all-cause death, nonfatal re-MI and nonfatal stroke during hospital stay. Secondary endpoint (SE) was all-cause death rate at 1-year after hospital discharge.

Results: 204 pts with ULMCA as culprit lesion were selected (1.1% of all pts): 77.9% male, mean age 69 ± 12 years, 97 (47.5%) underwent CABG alone, 92 (45.1%) PCI alone, 10 (4.9%) no revascularization and 5 (2.5%) both strategies. At admission, pts undergoing PCI alone presented more frequently with ST-segment elevation, persistent chest pain, cardiogenic shock and higher values of GRACE risk score. During hospital stay, severe left ventricular (LV) systolic dysfunction (<30%), need for mechanical ventilation, sustained ventricular tachycardia and aborted cardiac sudden death were also more common in these pts. Concerning PE, global rate was 18.5% (27 deaths, 6 nonfatal re-MI and 2 nonfatal stroke). It was significantly higher in pts undergoing PCI alone (32.6% vs. 3.1%, p < 0.01). After adjustment, surgical revascularization had 98% lower odds of PE occurrence compared to PCI (OR 0.02, 95% CI 0.002–0.22, p < 0.01). Cardiogenic shock at admission (OR 5.06, 95% CI 1.21-21.11, p = 0.03) and severe LV systolic dysfunction (OR 7.77, 95% CI 1.49-40.56, p = 0.02) were also independent predictors of adverse outcome. One-year all-cause death rate was 4.9%, with no significant difference at survival curves between PCI vs. CABG (Log-Rank p = 0.96). Over the 9-year, there was not a significant change in the use of one revascularization technique over the other.

Conclusions: MI with ULMCA as culprit lesion is infrequent and associated with a high rate of adverse events during hospital stay. PCI was preferred in higher risk pts but, even after adjustment, it was associated with a less favorable short-term outcome compared to surgical strategy. Nevertheless, long-term prognosis was excellent in hospital survivors with no difference between both techniques. Randomized trials are needed to determine the ideal revascularization strategy for these pts.