BEST POSTERS IN NON OBSTRUCTIVE CORONARY ARTERY DISEASE

P3425
Characteristics of patients presenting with myocardial infarction with non-obstructive coronary arteries (MINOCA) in Poland. Data from ORPKI national registry

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Background: Myocardial infarction with non-obstructive coronary arteries (MINOCA) is an important clinical problem especially in the era of extensive usage of coronary angiography in myocardial infarction patients. Its pathophysiology is poorly understood and several mechanisms have been proposed what makes diagnostics and treatment of MINOCA challenging in clinical practice.
Purpose: To assess characteristics of MINOCA patients in Poland based on data from the National ORPKI Registry.
Methods: In 2016, 49,893 pts with NSTEMI or STEMI entered the ORPKI registry. MINOCA, defined as non-obstructive coronary artery disease (CAD) and lack of previous coronary revascularization, was identified in 3,924 (7.8%) pts.
Results: MINOCA patients present more frequently with NSTEMI than STEMI. They were younger, more often females with a lower rate of CAD risk factors comparing to patients with obstructive CAD (Table). Time from pain onset to first medical contact and from contact to angiography was longer in the MINOCA pts (median 240 vs. 180 min; 330 vs. 145 min; respectively; $p<0.0001$ for both). Killip class >1 was diagnosed in 6.2% of MINOCA group (vs. 13.8% in obstructive CAD; $p<0.0001$) and cardiac arrest before angiography in 0.13% (vs. 0.54% in obstructive CAD; $p<0.001$). Myocardial bridge was visualized in angiography more often in the MINOCA group (2.2 vs. 0.4%; $p<0.0001$). Additional coronary assessment (FFR, ICUS, OCT) was marginally (<1%) used in both groups.

Table 1

	MINOCA (n=3,924)	Obstructive CAD (n=45,969)	p
STEMI (%)	22	48.9	<0.0001
NSTEMI (%)	78	51.1	
Age (years, Me Q1Q3)	65.00 (55.00; 75.00)	67.00 (59.00; 76.00)	<0.0001
Female (%)	52.0	32.9	<0.0001
Diabetes (%)	13.1	22.2	<0.0001
Smoking (%)	15.1	25.2	<0.0001
Arterial hypertension (%)	56.4	64.3	<0.0001
Kidney disease (%)	4.4	5.9	<0.0001
Previous stroke (%)	2.7	3.7	0.0014
Previous MI (%)	4.4	19.2	<0.0001

Conclusions: MINOCA patients represent a significant proportion of myocardial infarction patients in Poland. Due to multiple potential causes, MINOCA should be considered rather as a working diagnosis after coronary angiography and further efforts should be taken to define the cause of myocardial infarction in each patient.

P3426
Epidemiology of myocardial infarction with non-obstructive coronary arteries according to 2016 ESC definition

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Background: In 2016 the European Society of Cardiology (ESC) published the definition criteria for Myocardial Infarction with Non-Obstructive Coronary Arteries (MINOCA). Since then, there has been greater interest in this topic due to the heterogeneity of the previous studies. The aim of this work is to analyze the main epidemiological and clinical data of the MINOCA patients (pts) using the new definition criteria developed by the ESC.
Methods: Analytical and observational study developed in a University Hospital that serves a region or of 220000 individuals. Data of all consecutive MINOCA patients admitted during a 3 years period in our Hospital were analyzed and compared them with a group of 269 consecutive patients with acute myocardial infarction with obstructive coronary arteries admitted between July 2016 and December 2017. We used the definitions and clinical management of 2016 ESC Working Group position paper on MINOCA. We used Chi-square test or Fisher's exact to compare categorical variables. Time-to-event analyses were performed with the use of Kaplan-Meier estimates and compared with the log-rank test.
During a three year period (1st of January of 2015 to the 31st of December of 2017) 658 consecutive patients were admitted with a diagnosis of myocardial infarction and underwent coronary angiography. Of those, 118 fulfilled the 2016 ESC criteria of MINOCA. Based on that, MINOCA represents a 17.9% of the MI in which coronariography was performed. With an incidence of 39 MINOCAS per year, the incidence rate of our area is 0.18 cases per 1000 inhabitants/year. Main etiologies were Takotsubo Syndrome (28.0%), plaque disruption with transient thrombosis (20.3%), unknown despite all tests performed (16.1%), myocarditis initially non-suspected (11.0%), coronary spasm (8.5%), coronary emboli (5.9%), type 2 MI initially non-suspected (5.9%) and coronary dissection (1.7%). The remaining 3.6% is a miscellaneous group. MINOCA patients were younger (62±16 vs 67±13 years old, $p<0.01$)and the proportion of females was higher (51 vs 22% $p<0.01$). MINOCA pts had better cardiovascular risk profile: Hypertension (57 vs 62%, p 0.37), dyslipidemia (42 vs 57%, p 0.08) diabetes in (19 vs 37% $p<0.01$) and tobacco in (45.vs 65%, $p<0.01$). At 6 months follow-up, MINOCA survival showed a trend to be better (p [log-rank] 0.19, Fig.1), with no differences in the survival free of MACE, neither in the survival free of readmission. Pro-inflammatory conditions were more frequent in MINOCA group (38 vs 17%, $p<0.01$) and also psycho-emotional disorders were higher in MINOCA group (76 vs 42%, $p<0.01$).

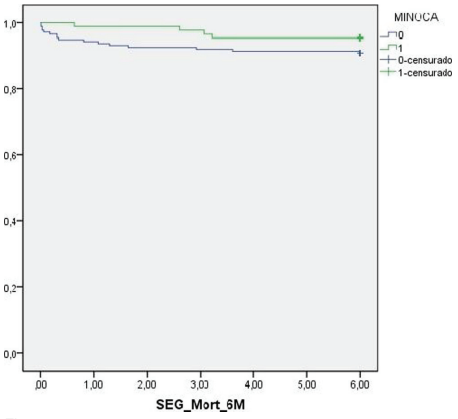

Figure 1

Conclusion: Patients who fulfill criteria of the working diagnosis of MINOCA had remarkable differences in the clinical profile compared to those with obstructive lesions. Despite those differences and better cardiovascular risk profile, the in-hospital and midterm prognosis are similar.

P3427
Intra-coronary administration of tacrolimus improves myocardial perfusion and LV function in patients with ST-segment elevation myocardial infarction undergoing primary coronary intervention

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Background: Effective therapeutics for reperfusion injury or no-reflow phenomenon during primary percutaneous intervention (PCI) for ST-elevation myocardial infarction (STEMI) remains lacking. We intended to investigate whether intracoronary (IC) injection of tacrolimus could improve myocardial perfusion status and clinical outcomes.
Methods: A multicenter double-blind randomized controlled trial (COAT-STEMI) was conducted since 2014 through 2017. We assigned 335 STEMI patients undergoing primary PCI into study group (IC tacrolimus 2.5 mg to culprit vessel before first balloon inflation) and placebo group (IC saline only) in a 1:1 ratio. Those patients with initial prevention of Killip III and IV STEMI were excluded from this study. The primary endpoints were defined as 1-month and 1-year major adverse cardiac events (MACE), including death, MI, stroke, repeated revascularization and hospitalization for heart failure. The secondary endpoints included angiographic TIMI myocardial perfusion grade (TMP), ST segment resolution (STR) on 90-minute follow-up electrocardiography, and echocardiographic left ventricular (LV) function.
Results: There was no significant difference in baseline characteristics between 154 patients in the tacrolimus group and 165 in the placebo group. The rate of MACE at 1 month (3.7% vs. 4.8%, P=0.634) and 1 year (11.8% vs. 11.4%, P=0.905) were similar between the two groups. In terms of perfusion status, post-PCI TMP grade (2.52 vs. 2.25, P=0.001), achievement of TMP grade 2 or 3 (92.6% vs. 84.7%, P=0.023) and 90-minute STR (65% vs. 51%, $P<0.001$) were significantly higher in the tacrolimus than placebo group. Additionally, the tacrolimus group had also higher 3D LV ejection fraction (60.7% vs. 57.8%, P=0.046) and lower mitral E/A ratio (0.47 vs. 0.67, P=0.014) at 9 months than the placebo group.
Conclusion: Intracoronary tacrolimus therapy for STEMI demonstrates the beneficial effects on the improvement of myocardial perfusion status and 9-month LV systolic and diastolic function, but not in clinical outcomes. (Clinical trials No.: ISRCTN38455499)