

RESULTS Baseline characteristics were well-matched between the two groups. The procedure-related complications (major residual shunting, left ventricular rupture, and device embolization) were higher in early intervention group than in late intervention group [6/21 (28%) vs. 4/22 (18%); $p=0.488$], but the difference was not statistically significant. The patients in early intervention group had better cardiac function at discharge ($42\pm 6\%$ vs. $36\pm 8\%$ in left ventricular ejection fraction; $p=0.010$). Occurrence of major adverse events (death, myocardial infarction, and acute heart failure) was lower in early intervention group than in late intervention group [5/21(24%) vs. 13/22 (59%); p for log-rank test = 0.017].

CONCLUSIONS Early Interventional VSR closure is a promising technique, and could improve the prognosis of STEMI complicated with VSR patients.

CATEGORIES CORONARY: Acute Myocardial Infarction

TCT-6

Five-year optical coherence tomography of patients with ST-elevation myocardial infarction treated with bare-metal versus everolimus-eluting stents: the RE-EXAMINATION study

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BACKGROUND Percutaneous coronary intervention with stent implantation is the standard of care in patients with ST-elevation myocardial infarction (STEMI). However, coronary stents implanted in patients with STEMI have higher risk of stent thrombosis (ST) compared to non-STEMI patients; and first-generation drug-eluting stents have more risk of very-late ST than Bare-metal stents (BMS). Pathophysiologic studies have been shown that the main cause of very-late ST is lack of strut coverage (ratio of uncovered to total struts per section (RUTSS) >30%). Second-generation of DES are aimed to improve the coverage of the metallic struts; but long-term have not been reported in patients with STEMI.

METHODS The EXAMINATION study is the first randomized trial comparing second-generation everolimus-eluting stents (EES) versus BMS in patients with STEMI. A total of 169 consecutive event-free patients included in the EXAMINATION study were screened to participate in the RE-EXAMINATION study. Patients with fatal events, target vessel revascularization, or with other important concomitant diseases were excluded. All patients included in the RE-EXAMINATION study underwent to coronary angiography and optical coherence tomography (OCT) imaging 5 years after randomization. The objective of the study was to compare the percentage of patients with at least 1 OCT section with RUTSS >30% between EES and BMS. Other OCT findings were also analyzed, such as: prevalence of malapposition, neointima pattern and observation of neoatherosclerotic lesions.

RESULTS A total of 65 patients were included (33 EES and 32 BMS). At the time of index procedure both group had similar mean age (57.9 vs. 56.0 years; $p=0.479$), gender (84.8% vs. 84.4% were males; $p=0.958$), diabetes mellitus (15.2% vs. 12.5%; $p=0.757$), anterior myocardial infarction (42.4% vs. 46.9%; $p=0.590$) and Killip class I (84.8% vs. 90.6%; $p=0.572$). Both groups were treated with similar number of stents per patients (1.30 vs. 1.25; 0.639); maximal stent diameter (3.11 vs. 3.25 mm; $p=0.191$) and total stent length (26.1 vs. 24.8 mm; $p=0.629$). A total of 49 patients have undergone to angiographic and OCT imaging 5 years after stent implantation at June 2015. The study will be completed in July 2015.

CONCLUSIONS The angiographic and OCT results of the study will be presented in the TCT Congress.

CATEGORIES IMAGING: Intravascular

KEYWORDS DES, OCT, ST elevation myocardial infarction

TCT-7

Trends and outcomes of percutaneous coronary intervention for ventricular tachycardia or fibrillation cardiac arrest: analysis from nationwide inpatient sample

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BACKGROUND The decision to perform cardiac catheterization and percutaneous coronary intervention (PCI) in resuscitated patients with sudden cardiac death remains controversial. Prior data suggest a potential benefit from percutaneous revascularization.

METHODS Using the Nationwide Inpatient Sample, we identified patients ($n = 275,325$) with ventricular tachycardia or fibrillation cardiac arrest from 2000 to 2011. Primary outcome was in-hospital mortality. We also measured the trends of PCI and in-hospital mortality during study period.

RESULTS Out of 275,325 patients with VT or VF cardiac arrest, 52,695 patients underwent PCI. In-hospital mortality was 21.2% vs. 53.2% (P -Value <0.0001) favoring PCI group. PCI use increased in VT or VF cardiac arrest from 10.2% in 2000 to 24.2% in 2011 with 24% absolute increase and 237% relative increase.

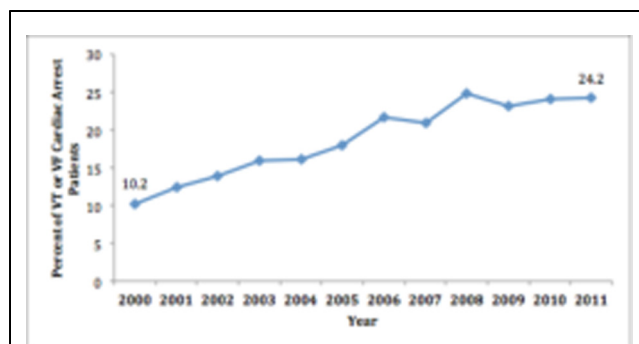


Figure 1: Trends of PCI in VT or VF Cardiac Arrest from 2000 to 2011

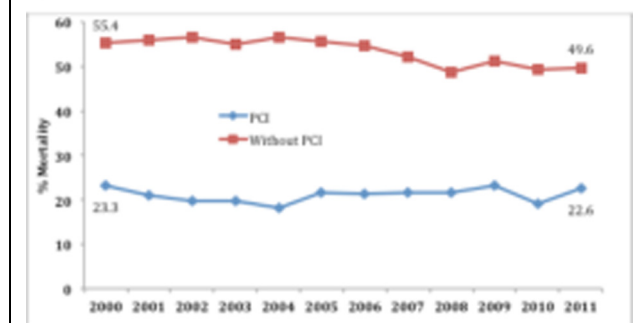


Figure 2: Trends of In-Hospital Mortality in VT or VF Cardiac Arrest with and without PCI from 2000 to 2011

CONCLUSIONS PCI is underutilized in VT or VF cardiac arrest patients and those, who do not receive PCI, experienced increased mortality. However, trends of PCI use are increased during the study period.

CATEGORIES CORONARY: Angiography and QCA

KEYWORDS Cardiac arrest, Mortality, in-hospital, Percutaneous coronary intervention