Abstract: **P1868**

**Risk of arrhythmias after myocardial infarction in patients with left ventricular systolic dysfunction according to mode of revascularization: a CARISMA substudy.**

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**Topic(s):**
Arrhythmias, General – Prevention

**Citation:**

Introduction
The CARISMA trial was the first study to use continuous monitoring for documentation of long term arrhythmias in post-infarction patients with left ventricular dysfunction. During the study duration (2000-2005), primary PCI (pPCI) as treatment of acute myocardial infarction was introduced approximately midway (2002) on the enrolling centres.

Purpose
The aim of this study was to describe the influence of mode of revascularization after myocardial infarction (AMI) on long term risk of risk of new onset atrial fibrillation, ventricular tachyarrhythmias and bradyarrhythmias.

Methods
The study is a sub-study on the CARISMA study population that consisted of patients with AMI and left ventricular ejection fraction =40%, which received an implantable loop recorder and was followed for 2 years. After exclusion of 15 patients who refused device implantation and 26 with pre-existing arrhythmias, 268 of the 312 patients were included. Choice of revascularization was made by the treating team independently of the trial and was retrospectively divided into primary percutaneous intervention (pPCI), subacute PCI (24 hours to 2 weeks after AMI), primary thrombolysis or no revascularization. Endpoints were new-onset of arrhythmias and major cardiovascular events (MACE). The Kaplan-Meier (figure 1) and Mantel-Byar methods were used for time to first event risk analysis.

Results
A total of 77 patients received no revascularization, whereas 49 received thrombolysis only and 142 received PCI. At two-years follow up patients treated with any PCI had a significant lower risk (0.40, n=63) of any arrhythmia compared to patients treated with thrombolysis (0.60, n=30) or no revascularization (0.68, n=16) (p<0.001, unadjusted) (figure 1). Risk of MACE was significant higher in patients with any arrhythmia (0.25, n=76) compared to no arrhythmia (0.11, n=93) at two years follow-up (p=0.004, unadjusted).

Conclusion(s)
The longterm risk of new onset arrhythmias after AMI was significantly lower in patients treated with any PCI compared to patients not revascularized or treated with thrombolysis. Risk of MACE was significantly higher in patients with new onset arrhythmias compared to patients with no arrhythmias.
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