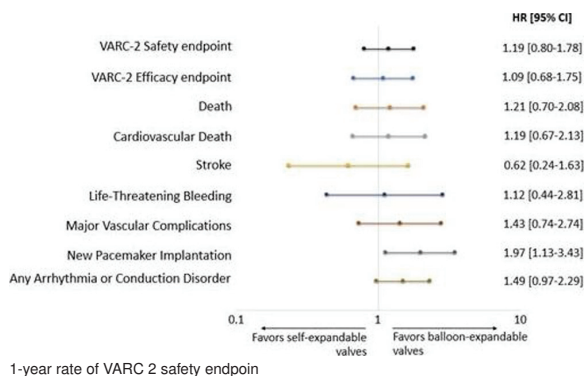


justed using multivariable Cox regression methods using the following covariates: age, BMI, prior MI, prior PCI or CABG, prior stroke, CKD, baseline atrial fibrillation, baseline permanent pacemaker, LV EF%, baseline pulmonary hypertension, EuroSCORE I, high surgical risk judged by heart team, (>26mm vs. ≤26mm), device generation, valve pre-dilation, valve post-dilation, post TAVI AI grade 2 or 3.

**Results:** We identified 474 patients treated with self-expandable valves (SEV) and 421 treated with balloon expandable (BEV). There was no significant difference in age nor in the rate of main cardiovascular risk factors between the 2 study groups. However, SEV were more likely used in patients with a history of stroke, prior pacemaker implantations and higher EUROSCORE I (16.8±10.5 vs 18.6±12.5, p=0.03). Echocardiographic and anatomical CT characteristics were similar between the groups except for anulus dimension (circumference 73.1 5.3 vs 72.1 5.8, p=0.022) being greater in BEV treated patients. At 1-year the rate of VARC 2 safety endpoint was 23.2% with SEV and 17.9% with BEV (p=0.045) (figure 1). After adjustment, there was no significant difference in the risk of VARC2, and other outcomes except for new pacemaker implantation. A sensitivity analysis was performed on those patients for whom cardiac CT data were available (n=433 total). The sensitivity analysis confirmed that the risks of 1-year VARC safety outcome and pacemaker implantation were comparable between BEV and SEV. A subanalysis on new generation BEV and SEV showed a similar risk of clinical outcomes between Sapien 3 and Evolut R, including pacemaker implantation.



**Conclusions:** SEV were preferentially used in patients with higher surgical risk. Nevertheless, the adjusted risk of 1-year clinical outcomes did not differ between groups with the exception of new pacemaker implantation, more common after SEV implantation. Any differential benefit of BEV over SEV observed in the entire cohort is abolished with the use of newer technology devices.

BEST POSTERS IN ATRIAL FIBRILLATION IN STEMI – A HARMLESS BYSTANDER?

P1493

**Impact of atrial fibrillation during ST-elevation myocardial infarction on infarct characteristics and prognosis**

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**Aims:** AF is frequently observed in patients with ST-elevation myocardial infarction (STEMI) and associated with worse clinical outcome. However, the mechanisms for this increased risk are not fully understood. The purpose of this study was to investigate the relationship of the presence of atrial fibrillation (AF) to cardiac magnetic resonance (CMR) derived myocardial salvage and damage as well as clinical outcomes.

**Methods:** This multicenter CMR study enrolled 786 STEMI patients. CMR parameters (infarct size, myocardial salvage index, microvascular obstruction and myocardial function) were assessed 3 (interquartile range [IQR] 2–4) days post-STEMI and compared between patients with or without AF during hospitalization. Major adverse cardiac events (MACE) were assessed as a composite of all-cause death, re-infarction and new congestive heart failure at 12 months.

**Results:** AF was documented in 48 (6.1%) patients. There was no significant difference in infarct size (18 [IQR 9–29] vs. 17 [IQR 9–25])% of left ventricular mass (%LV), p=0.340), myocardial salvage index (51 [IQR 34–69] vs. 51 [IQR 33–69], p=0.830), or microvascular obstruction (0.6 [IQR 0–2.0] vs. 0.0 [IQR 0–1.8])%LV, p=0.340) between groups. Patients with AF had significantly lower left ventricular (47 [IQR 34–54] vs. 51 [IQR 44–58])%, p=0.003) and left atrial (42 [IQR 17–57] vs. 53 [IQR 45–59])%, p<0.001) ejection fraction. AF was associated with MACE, even when adjusting for clinical risk factors (odds ratio=2.48 [95% confidence interval:1.22–5.03], p=0.0120) or CMR prognosis markers (odds ratio=3.77 [95% confidence interval:1.83–7.79], p=0.001).

**Conclusion:** This CMR study found no major differences in myocardial salvage, infarct size or microvascular damage in STEMI patients with or without AF. AF was, however, associated with cardiac dysfunction and independently related to MACE.

P1494

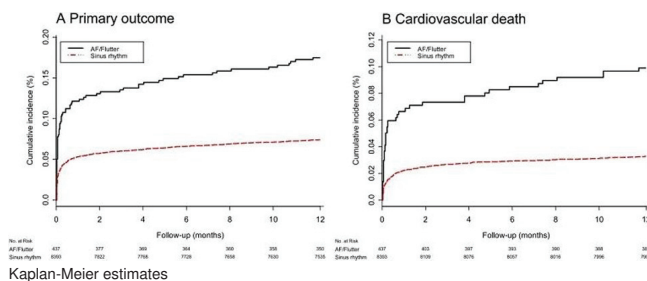
**The prognostic significance of atrial fibrillation in patients with ST-elevation myocardial infarction: a sub-study of the randomized TOTAL trial**

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**Background/Introduction:** Atrial fibrillation (AF) often accompanies ST-elevation myocardial infarction (STEMI). The long-term prognostic value of AF in STEMI is somewhat controversial.

**Purpose:** The aim of the present study was to determine the long-term prognostic significance of AF in the pre-PCI ECG in STEMI patients undergoing primary PCI. **Methods:** We analyzed 1-year follow up data of 8,830 patients from the randomized Trial of Routine Aspiration Thrombectomy with PCI versus PCI Alone in Patients with STEMI (TOTAL) trial. Patients with AF were compared with patients with sinus rhythm. The primary outcome was a composite of cardiovascular death, recurrent myocardial infarction, cardiogenic shock or new or worsening New York Heart Association (NYHA) class IV heart failure.

**Results:** Of the patients, 437 (4.9%) had AF on admission. Patients with AF were older and had more often a medical history of stroke, hypertension and myocardial infarction. The rate of primary outcome and cardiovascular death was higher in the AF group than in the sinus rhythm group (17.4% vs. 7.4%; HR 2.51; 95% CI 1.97–3.19, p<0.001 and 9.8% vs. 3.3%; HR 3.12; 95% CI 2.26–4.31, p<0.001, respectively). Patients with AF also had a higher rate of all-cause mortality (11.4% vs. 3.9%; HR 3.06; 95% CI 2.27–4.12, p<0.001), major bleeding (3.2% vs. 1.8%; HR 1.81; 95% CI 1.05–3.13, p=0.033) and stroke (2.7% vs. 0.9%; HR 3.21; 95% CI 1.75–5.91, p<0.001). AF was independently predictive of adverse outcome in multivariable analysis (HR 1.89; 95% CI 1.48–2.42, p<0.001).



**Conclusion:** AF in the ECG recorded in the acute phase of STEMI before primary PCI is an independent risk factor for worse long-term outcome. STEMI patients with AF have a higher risk of all-cause and cardiovascular death, severe heart failure and stroke at one-year follow-up.

P1495

**New-onset atrial fibrillation is a strong predictor of ventricular tachycardia/fibrillation occurrence and poor outcomes in patients with an acute myocardial infarction**

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**Background:** Atrial fibrillation (AF) as well as sustained ventricular tachycardia (VT)/ventricular fibrillation (VF) are common arrhythmias in patients with ST-segment elevation myocardial infarction (STEMI). Both types of arrhythmia are well-established markers of poor short- and long-term prognosis in this population. However, much less is known about the frequency of their coexistence and cumulative impact on prognosis in STEMI patients.

**Aim:** The aim of the study was to assess the incidence of new-onset AF and VT/VF, frequency of their coexistence and their cumulative effect on in-hospital and long-term outcomes in STEMI patients.

**Methods:** We analyzed 4,869 consecutive STEMI patients treated invasively between 2004 and 2015. The median follow-up was 61.3 months (range: 0–149.3 months). The study population was divided into 2 groups: AF Group encompassed 258 (5.3%) patients with new-onset AF, whereas 4611 (94.7%) subjects without newly detected AF were included into the Control Group.